Taiwan's Outward Foreign Direct Investment (OFDI) into the European Union

Quantitative Research

EIAS
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Data Collection and Analysis

Quantitative Research

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List of Abbreviations and Terms

BIA	Bilateral Investment Agreement
CEE	Central and Eastern Europe
EU	European Union
FDI	Foreign Direct Investment
FTA	Free Trade Agreement
ICT	Information and Communications Technology
IFDI	Inward Foreign Direct Investment
MOEAIC	Ministry of Economic Affairs, Investment Commission
MNC	Multinational Corporation
NACE	*Nomenclature statistique des Activités économiques dans la Communauté Européenne* - Statistical Classification of Economic Activities in the European Community
OFDI	Outward Foreign Direct Investment
PRC	People’s Republic of China
SME	Small and Medium-sized Enterprises
TRO	Taipei Representative Office
UK	United Kingdom
Knowledge Intensive	Services including: financial and insurance activities, legal and accounting activities, publishing activities, education and health

Less-Knowledge Intensive	Services including: wholesale and retail trade, real estate activities and land transport
Low-Tech	Products including: food products, wood products, paper products and furniture
Medium Low-Tech	Products including: petroleum, rubber and plastics, basic metals, fabricated metals, other mineral products
Medium High-Tech	Products including: chemicals and chemical products, electrical equipment, motor vehicles and machinery
High-Tech	Products including: pharmaceutical products and computer, electronic and optical products

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Chapter 1: Taiwan's Outward Foreign Direct Investment (OFDI) to Europe

1.1 Introduction

This paper is the result of a research project on Taiwanese Overseas Foreign Direct Investment (OFDI) into the European Union (EU). Throughout the course of this paper, recent developments in investment flows from Taiwan into the EU will be outlined, making evident the extent of Taiwan's economic presence in the EU and its member states. This report functions as a follow up to a 2014 report on the same subject also conducted by the European Institute for Asian Studies (EIAS). The aim of this new project is to both update the information within the previous report and provide contemporary analysis of recent trends in economic relations between Taiwan and the EU. It is hoped that this paper's findings will act to strengthen the investment relations between the European Union and Taiwan, and further demonstrate the value of an EU-Taiwan bilateral investment agreement (BIA).

Following phenomenal economic growth throughout the late-20th century and its ascent to high-income economic status, Taiwan's economic growth figures have remained strong[1]. The levelling out of Taiwan's economy and its role as a high-income nation have been accompanied by many of the trends experienced within high income countries elsewhere around the world. Included amongst these trends are Taiwan's high levels of OFDI, which similar to many advanced European economies and Asian countries including Japan and South Korea, significantly exceed Inward Foreign Direct Investment (IFDI)[2]. In addition to its changing investment relations, Taiwanese industry has also gone through a significant modernisation process. Industry in Taiwan has gradually shifted away from the labour intensive, heavy industries that drove growth throughout the 20th century, becoming increasingly capital and technology intensive. As its economy has adjusted to the realities of its high-income status, Taiwan has emerged as a global leader in technology and innovation. Nowadays, Taiwan is known the world over for its Information and Communication Technology (ICT) and its high-quality research and development (R&D), solidifying its reputation as a world leader in high-tech and innovation.

In order to establish the most complete picture possible of Taiwanese OFDI flows into the European Union, we have gathered the quantitative information on display throughout this document from a variety of databases, annual reports, and through a survey conducted by the report's authors in Brussels. Amongst the databases used were the Investment Commission of Taiwan, EUROSTAT, and the Orbis database. In addition to these, the survey conducted by the authors extended a short questionnaire to Taiwanese diplomatic staff in each EU member state, requesting they provide basic information[3] on Taiwanese companies operating in the country in which they are based. This process was not without its shortcomings, as various companies were unable to provide the relevant information. By gathering information from a wide variety of databases as well as this survey however, we have been able to establish a conclusive overview of Taiwan's investment relationship with the European Union, hedging against the various shortcomings and limitations of our data sources. Throughout this report, we will be using the OECD definition of Overseas Foreign Direct Investment, which states:

> "Foreign direct investment reflects the objective of obtaining a lasting interest by a resident entity in one economy ("direct investor") in an entity resident in an economy other than that of the investor ("direct investment enterprise"). The lasting interest implies the existence of a long-term relationship between the direct investor and the enterprise and a significant degree of influence on the management of the enterprise.

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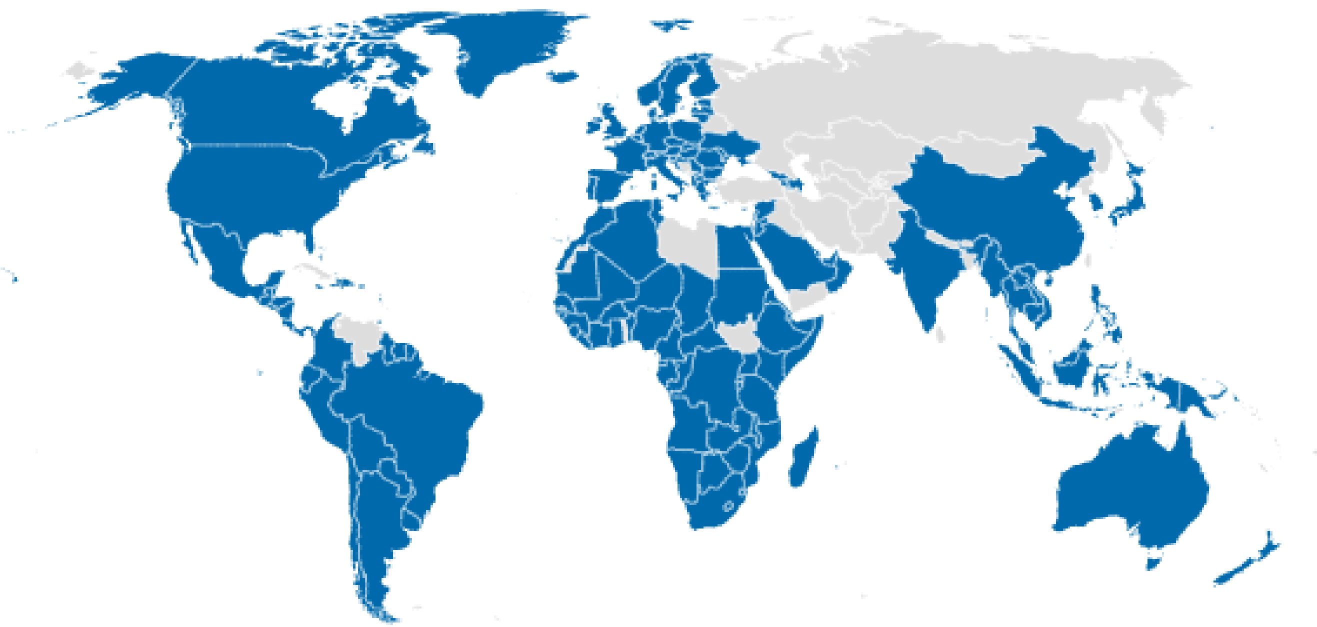
1 Averaging at around 3.5 per cent annually since 2000
2 Taiwan Insights, (2018), Taiwan's FDI, why outflows are greater than inflows. Retrieved from: https://taiwaninsight.org/2018/04/23/taiwans-fdi-why-outflows-are-greater-than-inflows/
3 Economic sector, number of employees, and overall assets

Direct investment involves both the initial transaction between the two entities and all subsequent capital transactions between them and among affiliated enterprises, both incorporated and unincorporated."[4]

Given its history of pioneering economic development through trade, Taiwan aims to establish trade and investment agreements with countries across the world, an ambition shared with the EU. The EU has a long history of forging such bilateral free trade agreements (FTA's) and investment agreements in the Asia-Pacific, with agreements either established or in the making with South Korea, Singapore, Vietnam, Japan, Australia and New Zealand. Figure 1 shows a map of the states which either currently have agreed preferential trade or investment agreements with the EU, or are in the process of agreeing such an agreement.

Figure 1: Geographical distribution of current or pending EU preferential trade or investment agreements



Source: DG Trade, Edited by Authors

Despite the EU's clear willingness to forge bilateral economic agreements with partners in Asia and throughout the world, no progress has been made towards intensifying Europe's economic relations with Taiwan. Through making evident the extent of Taiwanese investment into the EU, this paper will demonstrate the potential value of deepened economic ties. In the coming section, this paper will briefly analyse Taiwan's global OFDI flows before focussing on investment trends specific to the EU.

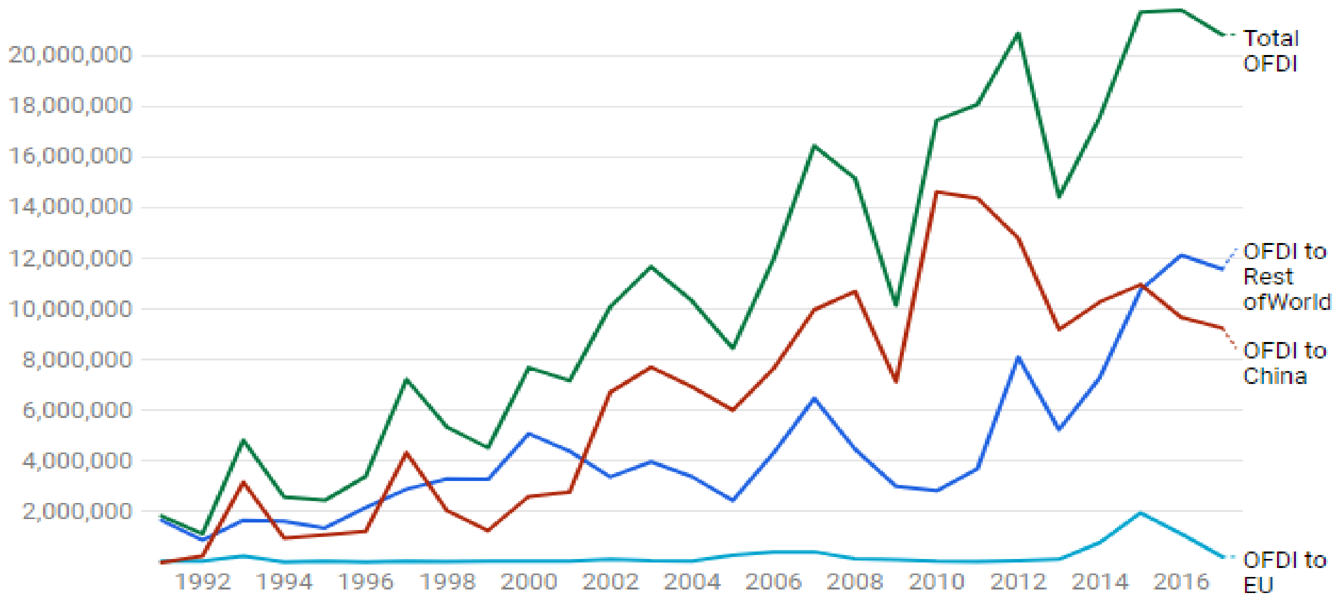
1.2 Taiwan's Global OFDI

Since Taiwan graduated to high-income status, its global OFDI outflows have grown from insubstantial levels in the mid 1990's to the point where they regularly exceed USD 20 billion annually. Of this, the largest individual recipient nation is the People's Republic of China (PRC), who in 2017 received almost USD 9.25 billion of Taiwanese OFDI - over 44 per cent of the USD 20.82 billion total. Much like with its overall OFDI figures, Taiwanese investment into the mainland has grown substantially since the early 1990's, reaching its peak in 2010 when investment exceeded USD 14.6 billion. Of this investment into the mainland, a large proportion of it has been directed into the manufacturing industries (over

4 OECD, (1999), *Benchmark Definition of Foreign Direct Investment.* Third Edition. Retrieved from: http://www.oecd.org/daf/inv/investment-policy/2090148.pdf

69 per cent in 2017), with electronics, computing, and electronic component manufacturing being the main beneficiaries. Whilst investment into mainland China remains high, in the past six years we have witnessed decline in cross-strait financial flows, with overall investment levels dropping by an average of 6.1 per cent annually over the past 6 years (see figure 2).

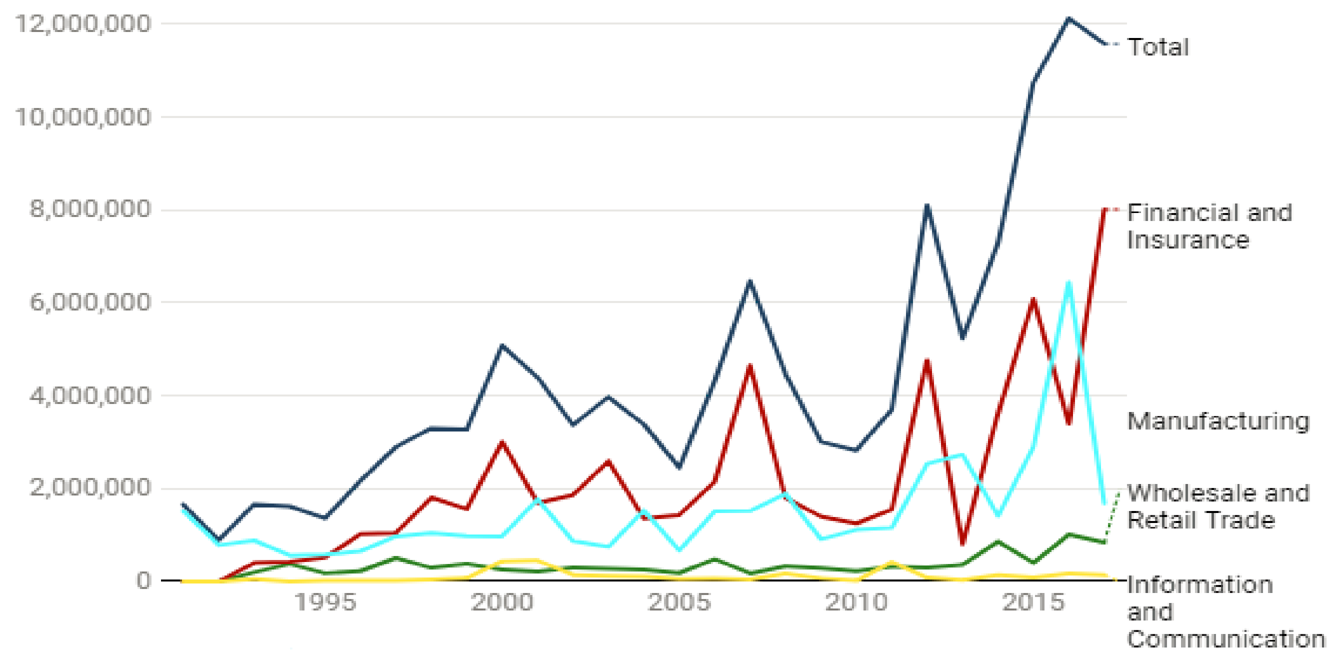
Figure 2: Taiwanese OFDI flows into the PRC, the EU, and rest of the world, 1991-2017 (in EUR 1000)



Source: Ministry of Economic Affairs Investment Commission, Monthly Report Edited by Authors

Whereas investment flows into mainland China have been in decline in recent years, throughout the same period, these flows have been steadily rising throughout the rest of the world, increasing at the average rate of 29 per cent annually since 2011. Other than a brief drop in 2013, investment to countries other than the PRC has been on the increase since a low recorded in the wake of the 2008 financial crisis. Whilst the PRC remains Taiwan's most important investment destination, as figure 2 shows, OFDI flows in 2015 to destinations other than the PRC overtook those crossing the Taiwan Strait for the first time since 2001. Of these flows, contrary to those entering the PRC, recent trends demonstrate how investment is channelled less into manufacturing and increasingly into finance and insurance industries. Also represented in figure 2 is the amount of Taiwanese OFDI captured by EU member states. With the exception of 2015, the EU has not attracted a significant proportion of Taiwanese investment, making the value of a bilateral investment agreement evident. Figure 3 demonstrates how the finance and insurance sector and the manufacturing sector have long been the most significant industry destinations for Taiwanese OFDI not going to the PRC. Since the mid-1990's, either sector have shared investment flows relatively evenly, however in 2017, investment into the world's financial and insurance sector was unusually dominant, making up over 69 per cent of overall OFDI. Of Taiwan's impressive investment into the global finance and insurance industry, the main beneficiaries are British Overseas Territories in the Caribbean. In 2017, this small region received over USD 5.7 billion of Taiwanese investment into its finance and insurance industry, representing in excess of 71 per cent of investment into this sector globally.

Figure 3: Global Sectoral Distribution of Taiwanese OFDI Excluding PRC, 1991-2017 (in EUR 1000)



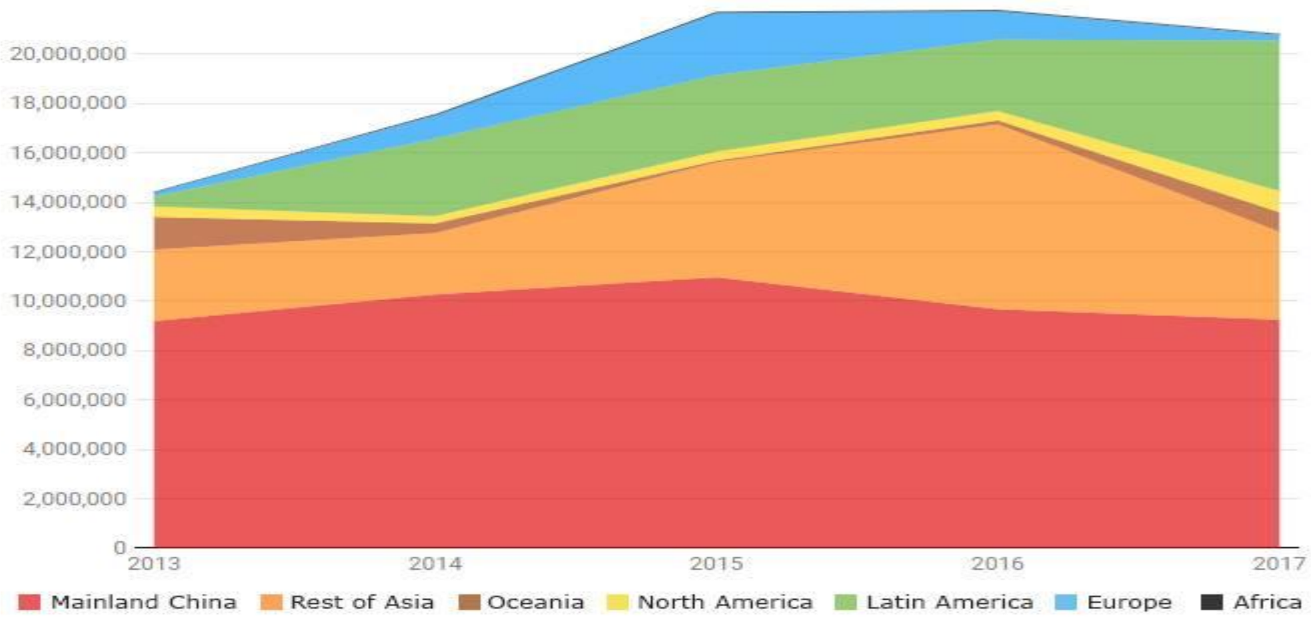
Source: Ministry of Economic Affairs Investment Commission, Edited by Authors

This trend of investment into the British Overseas Territories is certainly striking, however the large volume of OFDI flowing into the Caribbean from Taiwan is unlikely to remain there. Given the unique tax statuses of numerous small states throughout the Caribbean, it is often more convenient and cost effective to pass investment through a holding company in offshore financial centres. With a large proportion of the investment going into the Latin America region likely to be invested elsewhere around the world, tracking this investment presents a serious challenge. The high levels of Taiwanese investment into British Overseas Territories is somewhat problematic for this report, as we are unable to track the amount of said investment then flowing into Europe through financial centres in the Caribbean. This is a problem that must be kept in mind throughout this project. Whilst this report will provide a conclusive overview of investment flowing directly from Taiwan into the EU, the difficulty of tracking investment flowing through subsidiaries in third counties means that some Taiwanese investment into Europe will not be accounted for.

The recent and substantial investment boost into the Caribbean's finance and insurance sector is clearly reflected in global OFDI trends. Figure 4 shows the geographical distribution of Taiwan's overall global OFDI, with the Latin America region (which includes the Caribbean) emerging as the second most common destination for Taiwanese OFDI in 2018, overtaking the 'Rest of Asia'. Whilst it is true that much of this investment is likely to be redirected back around the world from Caribbean financial centres, there are other reasons why this region may be receiving a disproportionate amount of Taiwan's overall OFDI. Taiwan has established a number of free trade agreements (FTA's) with countries in the region, including Honduras, Panama, Guatemala, Nicaragua, and El Salvador[5], which is likely to have spurred greater investment flows. Furthermore, Central America is a well-connected region with abundant natural and human resources and low labour costs. These factors are all likely to have influenced the increasingly strong investment relations between Taiwan and Central America and the Caribbean.

5 Taiwan's Trade Agreements, June 2017, Retrieved from: https://www.export.gov/article?id=Taiwan-Trade-Agreements

Figure 4: Global Geographical Distribution of Taiwanese OFDI, 2013-2017 (in EUR 1000)



Source: Ministry of Economic Affairs Investment Commission, Edited by Authors

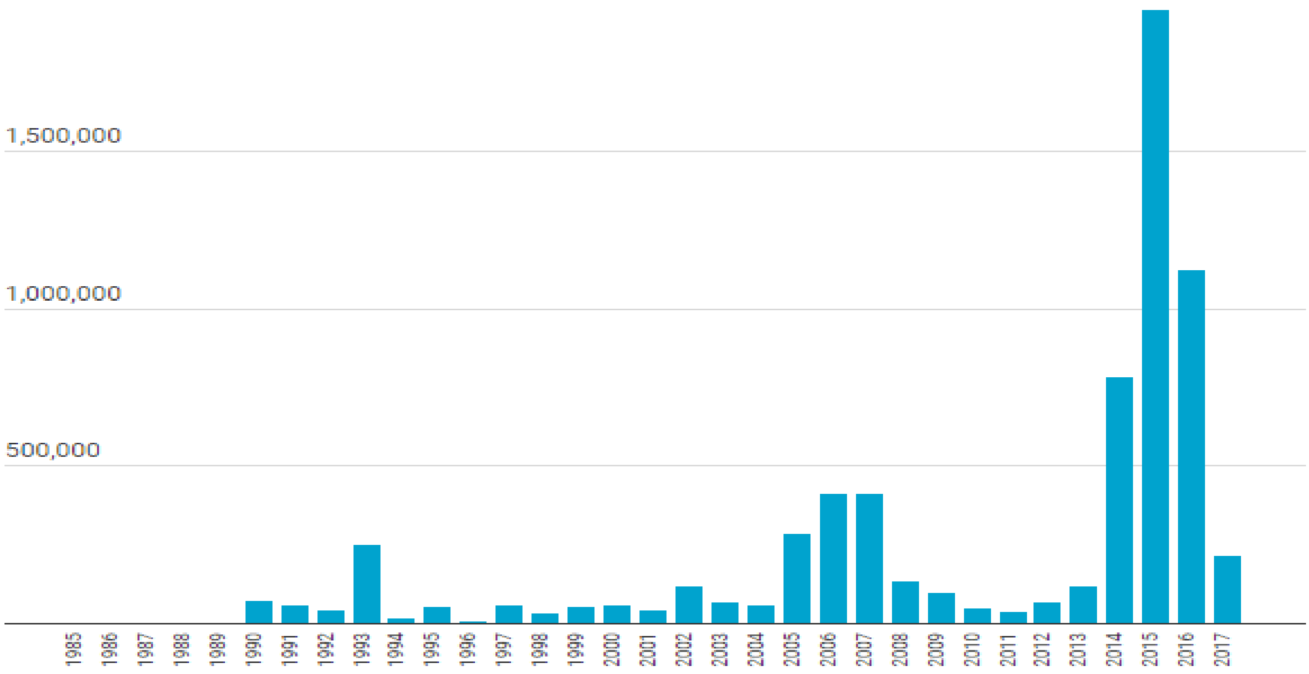
Alongside the significant recent rise in OFDI flows into Latin America, another noticeable trend displayed in figure 4 is the fluctuating share of Taiwanese investment captured by Europe. Understanding and analysing this occurrence alongside other trends in Taiwanese-EU investment relations will form the basis of the remainder of this report. In the coming section, general trends in Taiwanese OFDI flows into the European Union will be assessed, before the second chapter moves on to analyse patterns and features of Taiwanese owned companies in Europe.

1.3 Taiwan's OFDI in the European Union

During the past decade, Taiwan's OFDI flow into the EU has fluctuated substantially, experiencing some extreme ups and downs. In the aftermath of the 2008 recession, in line with global trends, Taiwanese OFDI into the world as well as into the EU decreased substantially. As clearly demonstrated in figure 5, from 2013, OFDI flows rebounded in robust fashion, growing to reach their peak of USD 1.95 billion in 2015. Since then however, total OFDI from Taiwan to the EU has considerably declined from USD 1.127 billion in 2016 to USD 0.22 billion in 2017[6].This trend appears to be continuing into 2018, with the Taiwanese Ministry of Foreign Affairs' Investment Commission demonstrating a 61 per cent drop in Taiwanese OFDI into the EU from January to May this year when compared to the same period in 2017.[7] Whilst this occurrence appears largely negative, it demonstrates the impressive scope for improved investment relations between the EU and Taiwan. Potential explanations for this trend can be found overleaf.

6 Investment Commission, Ministry of Economic Affairs (2018). *Monthly Report (May 2018)*. Retrieved from: https://www.moeaic.gov.tw/news.view?do=data&id=1245&lang=en&type=business_ann
7 Ibid

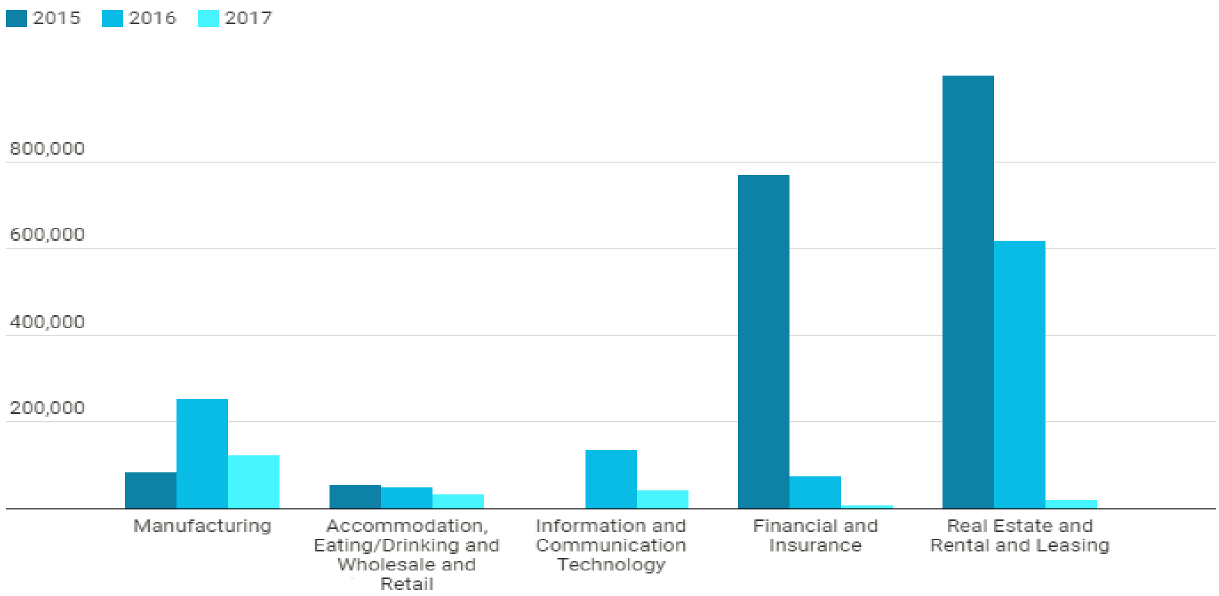
Figure 5: Taiwanese OFDI into the EU, 1985-2017 (in EUR 1000)



Source: Ministry of Economic Affairs Investment Commission, Edited by Authors

Contextualising the drop in investment displayed in figure 5, figure 6 shows the three-year trend of investment flows into the European industries most popular amongst Taiwanese investors. To some extent, these industries reflect global trends, with figures for manufacturing, financial and insurance industries, wholesale and retail, and ICT over the past three years amongst Taiwan's top investment targets globally (figure 3). The European industry that over the past three years has received the bulk of Taiwanese OFDI however - real estate, rental and leasing - is far less represented globally.

Figure 6: Taiwanese OFDI Outflows to the EU by Industry, 2015-2017 (in EUR 1000)



Source: Ministry of Economic Affairs Investment Commission, Edited by Authors

Over the past three years, investment into real estate, rental and leasing has made up over 51 per cent of Taiwanese OFDI into the EU. In 2015, when Taiwanese investment into the EU real estate sector exceeded USD 1 billion, this figure made up over 94 per cent of worldwide Taiwanese investment into real estate, rental and leasing. Another point of note here is that not only did the EU account for over 94 per cent of Taiwan's global investment into the real estate market, but that the UK accounted for in excess of 85 per cent of this investment[8]. The drop in Taiwanese investment into both this sector and the financial and insurance sector however, is the most noticeable trend demonstrated in figure 6. The declining levels of investment over the past two years into these industries has been stark, with investment into real estate dropping by over 98 per cent and those into finance and investment dropping by over 99 per cent[9]. Making sense of these trends is difficult, however the uncertainty surrounding investments into the UK following the Brexit vote in June 2016 is sure to have been a significant factor. With the amount of Taiwanese OFDI into the EU being captured by the UK falling from 68 per cent in 2015 to 10 per cent in 2016, the high levels of financial uncertainty surrounding Brexit at least partially explains this drop. Additional information on Brexit's impact on global investment trends can be found in the text box. Although investor confidence in the UK has rebounded in recent years, with Brexit on the horizon, it is in the EU's interest to ensure that Taiwanese investment doesn't leave the European Union along with the UK. Within this context, figure 8 (page 15) shows how in 2017, Taiwanese investment into the EU's finance and insurance sector - once dominated by the UK - is now flowing increasingly into alternative European destinations. This is certainly a positive sign for the EU's post-Brexit investment relationship with Taiwan.

Despite the turbulent variations in Taiwanese investment into the EU's financial and real estate industries over the past three years, figure 6 demonstrates how some other industries have proven more consistent investment targets. Alongside accommodation, eating/drinking and retail, which has seen just a very small drop in investment flows, manufacturing industries have also proved themselves a reliable target sector for Taiwanese investment. Manufacturing industries have long been popular investment targets for Taiwanese OFDI within Europe, with this trend persisting through an otherwise unpredictable period of investment. The flow of Taiwanese investment into European manufacturing industries will be the source of further analysis in Chapter 2.

Brexit and global investment trends

Brexit, and the economic and political uncertainties that have accompanied it, has had a global reach. Britain's reputation amongst global investors took a knock as a result of 2015's referendum, with a 2018 report from EY Consulting[10]. showing that 21 per cent of investors changed their investment plans following the leave vote. An interesting finding in this report is that the most pessimistic investors into the UK derived from Asia, with 25 per cent of Asian investors expected to move assets last year as opposed to 1 per cent of Western Europeans. This trend of Asian investors exercising particular caution when investing into Britain is reflected in Taiwanese investment trends.

After an initial drop, foreign investment into the UK has recently rebounded somewhat as confidence in UK markets is gradually restored. Trends in Taiwanese investment once again conform to this pattern.

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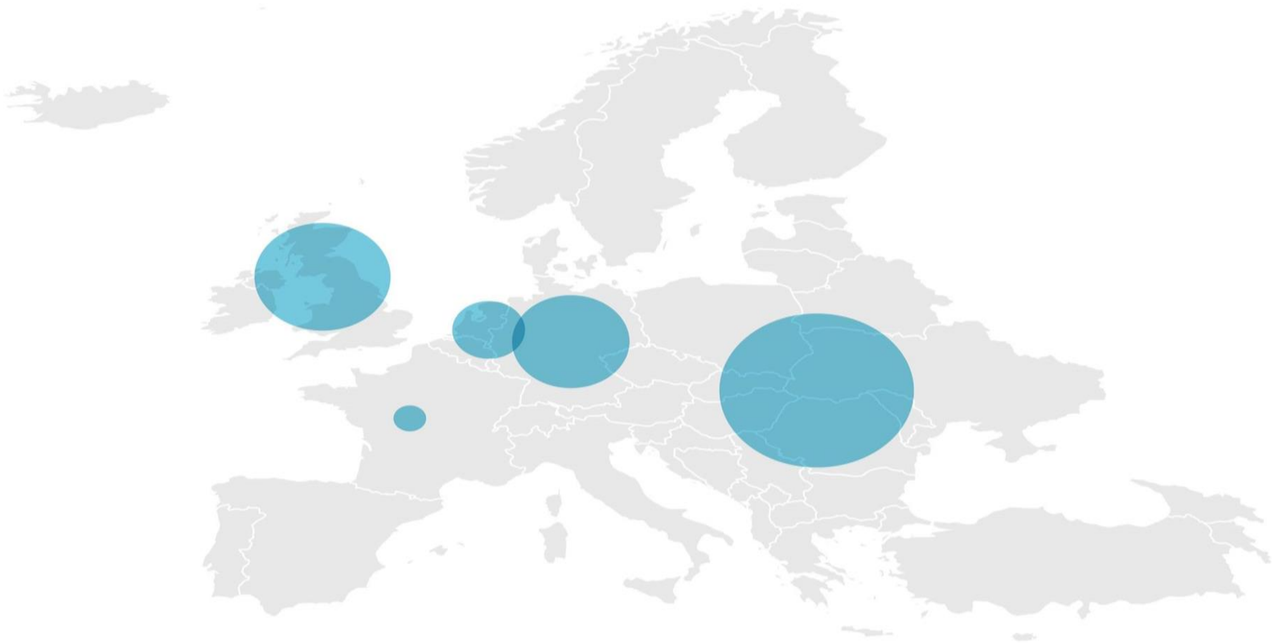
8 Investment Commission, Ministry of Economic Affairs (2015). *Monthly Report (December 2015)*
9 Investment Commission, Ministry of Economic Affairs (2015). *Monthly Report (December 2015)* and (*December 2017*)
10 EY Consulting, Inward Investment After Brexit (2018) Retrieved from: https://www.ey.com/Publication/vwLUAssets/EY-Inward-investment-after-Brexit/$FILE/EY-Inward-investment-after-Brexit.pdf

Figure 7: Regional Distribution of Taiwanese Investment into the EU, 2017



Source: Ministry of Economic Affairs Investment Commission, Edited by Authors

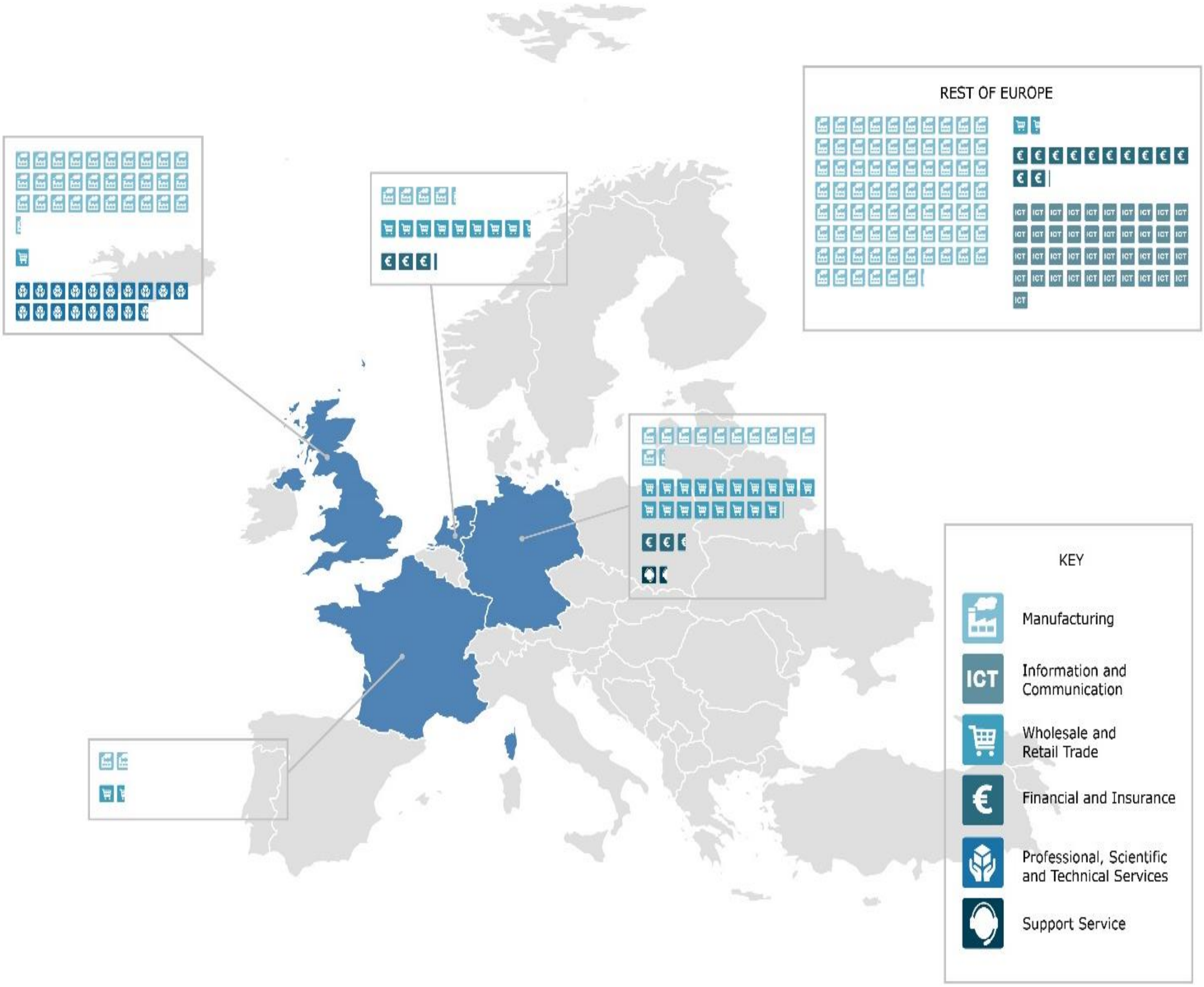
In 2017, whilst the amount of overall Taiwanese OFDI into the EU dropped significantly, the UK's share of this diminishing investment rebounded somewhat to 21 per cent, perhaps a result of reduced concern vis a vis Brexit (see text-box). This statistic is represented in figure 7, which maps the regional distribution of Taiwanese OFDI into Europe. The data used to produce this map was collected from the Taiwanese Ministry of Economic Affairs' Investment Commission (MOEAIC), and whilst useful for drawing one's attention to the major European destinations of Taiwanese investment, the data set is incomplete[11]. From this map, it is clear that the historically dominant investment destinations of the UK, Germany, The Netherlands and France gather a large percentage of investment, with the UK returning to be the largest single beneficiary out of all the individual countries assessed. One striking feature of figure 7 is the proportion of investment flowing to 'other' countries in Europe - represented by the large blue circle over the east of Europe. The countries falling within this category include all European nations excluding the four (the UK, Germany, the Netherlands and France) that have been previously mentioned and the Czech Republic. In 2017, these 'other' countries attracted over 56 per cent of Taiwanese investment into the EU, more than any other year on record. Whilst it is too soon to conclude whether this represents a regional reorientation of Taiwanese investment towards less traditional partners, this information is certainly salient. This represents a potentially interesting trend, and the subject of the geographical distribution of Taiwanese investment and Taiwanese firms throughout Europe will be brought further into perspective throughout this report's second chapter.

Having laid out the regional distribution of Taiwanese investment into Europe in 2017, figure 8 provides a sectoral breakdown of these OFDI flows. Of all of the investment flowing into Europe from Taiwan, 6 key sectors captured in excess of 99 per cent of total OFDI. These sectors are listed in figure 8's key next to corresponding icons; when seen in a box representing each country, one icon is equal to USD 1 million of investment. The sectoral and geographical location of Taiwanese investment demonstrated in figure 8 provides a useful overview of investment flows as well as demonstrating some interesting trends. It is clear that the manufacturing sector attracts a large proportion of

11 Only provides country specific data for France, the UK, Germany, the Netherlands, and the Czech Republic

Taiwanese investment into Europe. Given that manufacturing represents a wide variety of industrial sectors, within chapter two, a breakdown of investment into this broad category will be provided. The large number of industrial sectors covered by the manufacturing icon goes some way to explaining the limited number of European industries receiving investment from Taiwan in 2017, however the fact that almost 100 per cent of Taiwanese investment into the EU was channelled into six broad industrial sectors is surprising. Given Taiwan's strong European presence in maritime industries and air services[12], the negligible investment into these historically strong sectors unveils an area in which investment can be enhanced. Other points of interest within figure 8 include the lack of ICT investment into the four Western European countries that have been specifically studied. This could result from the lower labour costs throughout Central and Eastern Europe[13] in combination with their strong performance in the Global Innovation Index[14].

Figure 8: Sectoral Distribution of Taiwanese OFDI into the EU by Region, 2017



Source: Ministry of Economic Affairs Investment Commission, Edited by Authors

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12 Shown in the athour's EU-wide survey
13 Discussed later in the report
14 Retrieved from: https://www.globalinnovationindex.org/gii-2018-report#

1.4 Conclusion

Throughout the opening chapter, this report has laid out both the overarching patterns of Taiwanese global OFDI flows and assessed the trends of Taiwanese investments into Europe. Having initially demonstrated how OFDI from Taiwan into the People's Republic of China has recently been overtaken by flows heading to the 'Rest of the World'[15], the emerging investment destinations were analysed. Benefitting most from this recent upsurge in Taiwanese direct investment has been the Latin American region, with financial and insurance industries in offshore financial centres throughout the Caribbean attracting a substantial share of Taiwan's 2017's annual OFDI. What has become clear throughout this chapter, is that whilst Taiwanese OFDI flows have generally been increasing; especially in 2017, Europe has struggled to capture a significant share of this investment. The last three years have been a turbulent time for Taiwanese OFDI flowing into the EU, partly as a result of the uncertain political-economic climate resulting from the UK's 2015 Brexit vote. Whatever the causes, 2017 Taiwanese OFDI flows into the EU certainly leave much to be desired. As Taiwanese investment into the EU wanes, decision makers in Brussels should concern themselves with how investment relations with their long-standing economic partner can be both restored and built upon. Robust investment ties between the EU and Taiwan are in the vested interest of both parties, and one way through which significant gains can be made would be through the establishment of a BIA.

15 Other than the PRC

Chapter 2: Patterns and Features of Taiwanese Owned Companies in Europe

2.1 Introduction

After the analysis of Taiwan's global OFDI trends, this chapter will move on to focus on Taiwanese companies operating in Europe, providing an overview of their nature and characteristics. From a macro-perspective, it is clear that Taiwanese companies demonstrate specific investment characteristics, such as their presence across various industry sectors and geographical locations.

The data which has been gathered, analysed and presented in this chapter has been retrieved from a variety of sources including the Orbis financial database. The Orbis database compiles information on over 300 million companies worldwide from regulatory and other sources[16]. Despite the high quality and extensive data found in this well-established database, there is a need to acknowledge the lack of complete information with regards to Taiwanese companies operating in Europe. Whilst ample information is available to conduct this study, some data gaps are noticeable. Moreover, the database used has incomplete information of the year 2017 and 2018, thus some of the forecasts and graphs need to be assessed with some caution.

The data of all companies has been represented graphically in order to make it more readable. Hence, companies have been classified according to their industry types (manufacturing or services), to their technology level (high-tech or low-tech), and to their knowledge intensity (less knowledge-intensive and knowledge-intensive services)[17]. This classification has been made upon each firm's NACE numbers, which are European Classifications of Economic Activity numbers codified by EUROSTAT according to the 2008 Revision (Rev.2). Specifically, the NACE numbers are composed of four digits that group firms into a type of industry and sector, providing a framework from which one can analyse firm distribution by industrial sector. Further explanation of the classification will be provided in section 2.3.

This chapter is composed of four sections. Section 2.2 gives an overview of the characteristics of the 1435 Taiwanese companies listed on the database used throughout this report. Based on the information available on the used database, companies are also analysed according to the year of establishment and the size of the enterprise, in order to provide a broader picture and some background information. Section 2.3 discusses the sectoral distribution of Taiwanese owned firms in Europe with the aim to understand the proportion of Taiwanese investment in certain industries. The trend of firm establishment by industry is presented to deepen our understanding on what kind of industrial clusters are forming in Europe. Section 2.4 is dedicated to the geographical patterns. Taiwanese investment is presented according to its geographical distribution around Europe in order to observe whether Taiwanese investment has been forming in certain European regions, and how they differ with regards to industry and size of firms.

2.2 Overview of European based Taiwanese firms: year of establishment and size of firm

According to the European Commission, the EU is Taiwan's fifth largest overall trading partner, behind only the PRC, Hong Kong, the USA and Japan. In 2017, the value of goods being traded between the two regions surpassed EUR 50 billion, making Taiwan the EU's 16th most important trading partner globally[18]. In addition to this strong trade relationship, the EU has consistently played a significant role in investment into Taiwan, with 2017's European FDI into Taiwan surpassing 7 billion USD for the third time in history, accounting for 64 per cent of total FDI into Taiwan[19]. Whilst the EU is Taiwan's most important source of foreign direct investment, comparatively, Taiwanese OFDI into Europe has

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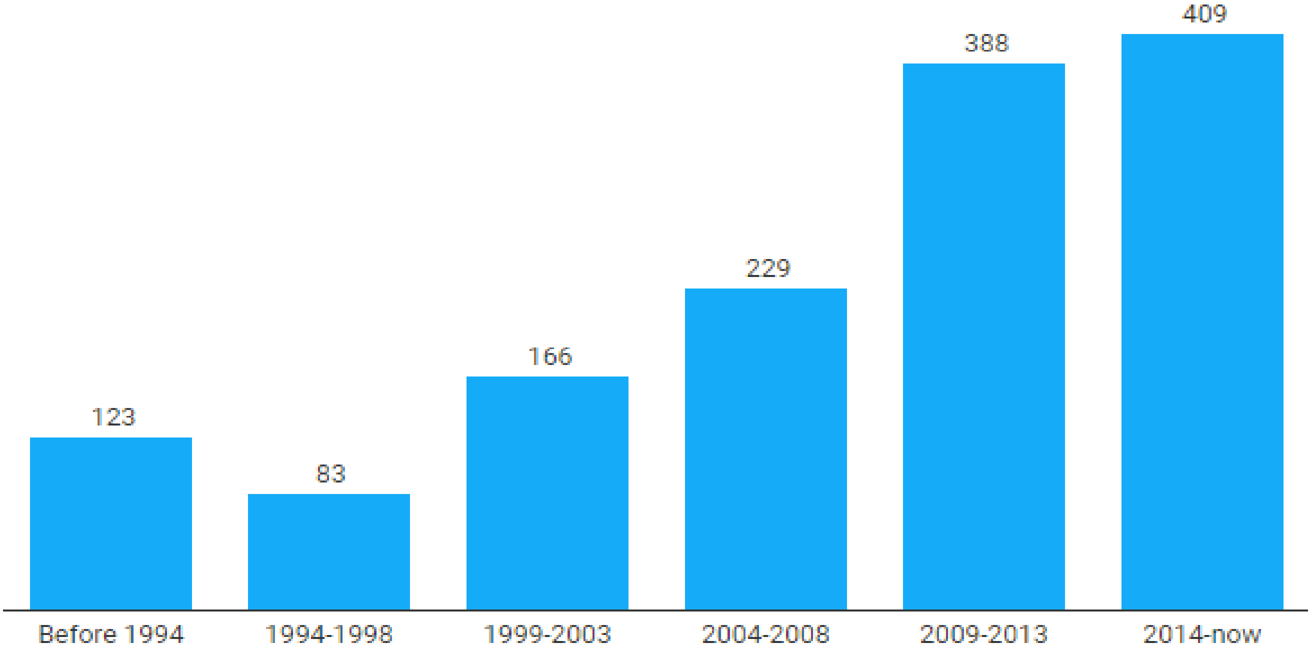
16 https://www.bvdinfo.com/en-apac/our-products/company-information/international-products/orbis
17 Classifications can be found under Abbreviations and Terms - Page 4&5
18 European Commission DG Trade, EU top trading partners 2017, Retrieved from: http://trade.ec.europa.eu/doclib/docs/2006/september/tradoc_122530.04.2018.pdf
19 Trade and Investment Relations between Taiwan and the EU, 2016, Retrieved from: https://www.taiwanembassy.org/uploads/sites/125/2015/09/201705-Relations-between-Taiwan-and-the-EU.pdf

scope for increase. After reaching a substantial peak of USD 1.9 billion in 2015, as demonstrated in chapter one, this figure dropped to USD 220 million in 2017.

In order to gain a complete understanding of the patterns of Taiwanese investment into the EU, it is important to assess the nature and actions of Taiwanese firms operating within the European Union. Providing background information on these firms, such as their size and period of establishment, will facilitate a greater understanding of the type of Taiwanese investment into Europe. This section will initially analyse the year of establishment of various Taiwanese firms operating in the EU before turning its attention to their size and structure of these firms.

Looking at figure 9, it is clear that the majority of Taiwanese firms operating in Europe were set up or acquired from 2004 onwards. Since 1994, at which point only 123 Taiwanese firms had been established in Europe, the number of Taiwanese firms within the EU has risen incrementally. Between the periods of 1994-2003 and 2004-2013, the number of Taiwanese firms established in Europe increased by 147 per cent. The figures from 2014-now show a modest increase from the previous, 2009-2013 period, however given how the data on the Orbis database for 2017 and 2018 is incomplete, the ultimate number of firms being established in this period is sure to be far higher. These patterns are in line with global trends, as globalisation has connected markets around the world and pushed companies to increase international investment in order to remain globally competitive[20].

Figure 9: Period of Establishment of Taiwanese Firms in the EU (data incomplete - 37 firms unaccounted for)



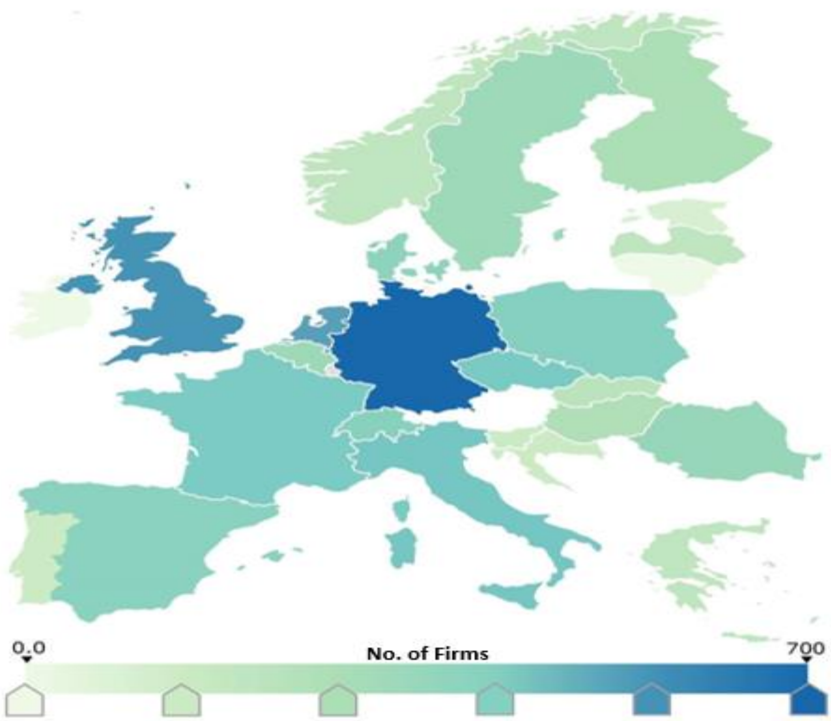
Source: Orbis, Edited by Authors

The rising number of firms establishing themselves in Europe from 2004 onwards is possibly attributable to the enlargement process that the EU has gone through since the early 2000's. In 2004, 10 new countries, predominantly from Central and Eastern Europe, were welcomed into the European Union. In addition to this, Romania and Bulgaria joined the union in 2007, and Croatia in 2013. Whilst this process certainly opened up more potential investment destinations within the EU, to accredit the rising number of Taiwanese firms to this process is erroneous. Figure 10 maps the geographical

20 Hall M, (2018), Globalisation and international investment, Investopedia, Retrieved from: https://www.investopedia.com/ask/answers/022615/what-effect-has-globalization-had-international-investments.asp

distribution of Taiwanese firms operating throughout the EU in 2016, with the most popular destinations for firms being in Western Europe. Of the 13 countries that joined the Union since 2004, only 102 Taiwanese firms operate within their borders, compared to 1234 based in Western Europe[21]. This being said, as was uncovered in chapter one, non-traditional European[22] investment partners captured over half of Taiwan's overall OFDI flowing into Europe in 2017. Analysing both the 2017 firm location and OFDI flows from Taiwan to Central and Eastern Europe would make for interesting reading, however unfortunately, the 2017 data available to us is incomplete, and is therefore unavailable for analysis.

Figure 10: Geographical Distribution of Taiwanese Firms 2016 (2017 data incomplete)



Source: Orbis, Edited by Authors

Taiwanese economic and political relations with countries in Central and Eastern Europe (CEE) are sure to make an interesting subject of analysis in the coming years. MOEAIC's 2017 investment report[23] demonstrates the increase of Taiwanese investment outside of Western Europe, an intriguing trend in the EU-Taiwan investment relationship. A major driver behind this Eastward shift of Taiwanese investment into Europe is the low cost of and high skill labour in CEE. With the costs of setting up and running businesses in CEE being low when compared with the rest of Europe, increasingly good infrastructure links, growing economies, and growing consumer spending, the eastward transfer of Taiwanese OFDI into Europe is understandable.

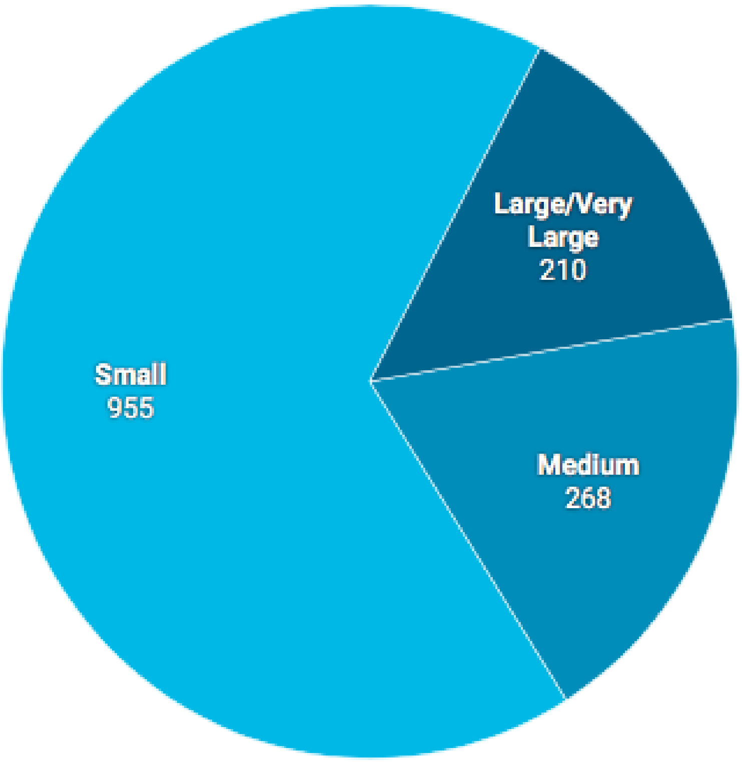
Concerning the size of Taiwanese firms operating in Europe, figure 11 shows that around two-thirds of these firms (955) are classified as small sized firms[24], with the remaining one-third being composed

21 Western Europe includes the UK, Germany, France, Belgium, Netherlands, Luxembourg, Austria and Switzerland
22 Counties other that the UK, Germany, the Netherlands, and France
23 Investment Commission, Ministry of Economic Affairs (2017). *Monthly Report (December 2017)*
24 Firms with fewer than 50 employees

of medium sized firms[25] (268) and large/very large sized firms[26] (210). This information however, is somewhat misleading. Whilst on an operational level, many of the Taiwanese firms based in the EU are of a small scale, they are often subsidiaries or small to medium sized service centres of large Taiwanese MNC's. This fact was clarified in the survey conducted by the EIAS. Due to their low numbers of employees, many companies surveyed fell under the definition - small and medium sized enterprises (SME's)[27] - despite having MNC's as parent companies. A good example of this is Acer. Of the survey's respondents, seven were subsidiaries of Acer, and of these seven, six had sufficiently small numbers of employees to be defined as SME's. Responses from subsidiaries of ASUS, Delta, Foxconn, Evergreen, Zyxel and numerous other large Taiwanese firms showed a similar picture. This must be considered throughout this report, as discussion of company size will be in reference to the size of the company subsidiary, not the parent company.

Whilst SME's certainly play a significant and important role in bilateral investment relations between Taiwan and the EU, the findings from the EIAS survey demonstrate that Taiwanese MNC's play a much larger role in investment relations that the figures indicate. This being the case, industrial collaboration between the two regions needs to ensure that its focus is not directed disproportionately towards SME's, allowing a role for Taiwan's numerous and influential multinationals.

Figure 11: Size of Taiwanese Firms in EU (as of 2017)



Source: Orbis, Edited by Authors[28]

25 Firms with between 50 and 250 employees
26 Firms with over 250 employees
27 The definition of an SME (used throughout) refers to enterprises which employ fewer than 250 persons
28 Two firms did not provide data on company size

Taiwanese Industrial Cooperation in Europe

With both Taiwan and the EU aware of the potential gains from increased industrial collaboration, this has emerged as an important means of strengthening bilateral relations. Lots of this collaboration has focused around SME's despite them playing a smaller role in economic relations than statistics indicate as was shown previously. Here we have highlighted a selection of collaborative measures being taken by Taiwan and the EU.

The European Cluster Collaboration Platform organises events, such as the European Innovation Week in Brussels and Taiwan to provide a platform where the EU cluster organisations could establish collaborations with Taiwanese clusters. There has been a steady increase of Taiwanese cluster community's interest in the EU as shown by the increase of participants. Currently, Taiwan is a target country for three ESCP-4i[28] projects: New Frontiers in Food, Silicon Europe Worldwide and SmartCityTech. Taiwan is widely recognised as a leader in ICT and electronics by the ESCP-4i partnerships, and events facilitating greater cooperation with Taiwan have revolved around the fields of smart industry, the circular economy, and 5G.

During the European Innovation Week, a memorandum of understanding (MOU) was signed in 2016 between the Silicon Europe Alliance and the Taiwan External Trade Development Council. The MOU will provide the foundation and the framework for more collaboration between the SMEs and knowledge institutes that are active in the thematic fields of micro- and non-electronic and Smart-X systems. It aims to support European and Taiwanese companies to find new partnership opportunities.

In 2015, Taiwan also joined the Enterprise Europe Network, the world's largest support network for SMEs. This is hoped to significantly deepen EU-Taiwan economic relations and encourage SMEs from either region to invest internationally. EU-Taiwan investment cooperation in the sphere of SMEs has recently been further compounded by the signing of and administrative arrangement on cluster cooperation between either party on the 8th of June 2018.

Having investigated the size and geographical distribution of Taiwanese firms throughout Europe, the coming section will move on to track the sectoral distribution of these firms. Through providing an overview of the Taiwanese presence in manufacturing and service sectors, we can develop a clearer understanding of OFDI trends and contextualise the above information.

2.3 Sectoral distribution of Taiwanese owned firms in Europe

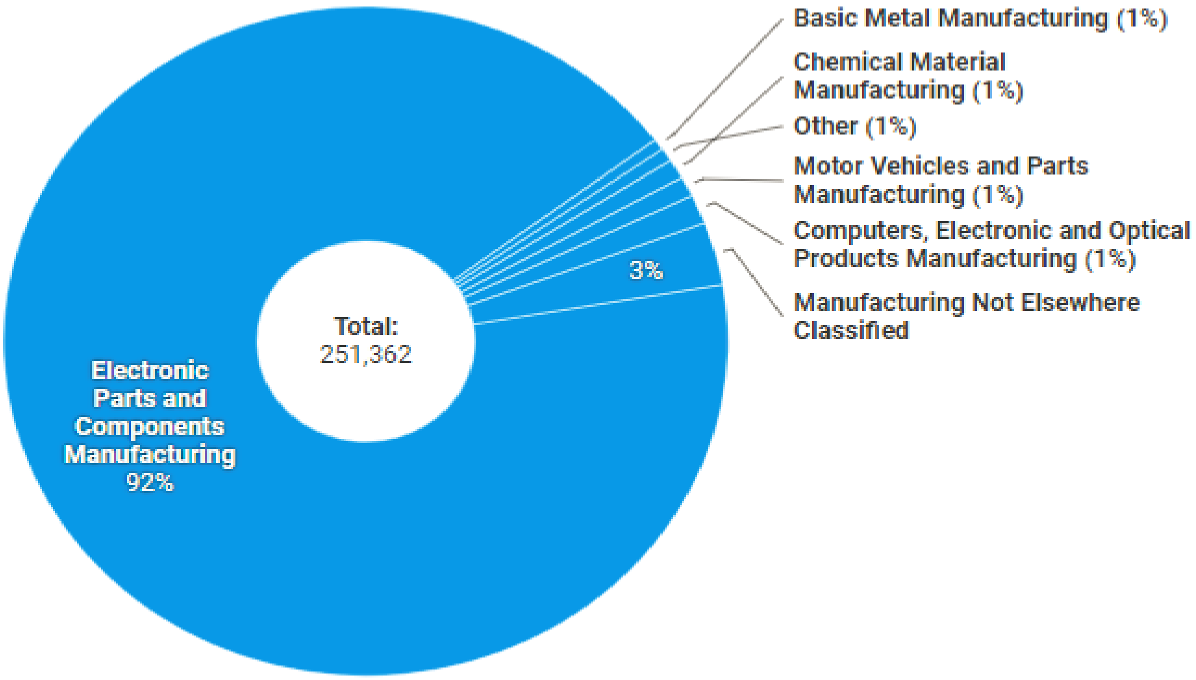
This section will provide analysis on the sectoral distribution of Taiwanese companies whilst differentiating between *High-tech, Medium High-tech, Medium Low-tech and Low-tech* sectors within manufacturing, and knowledge intensiveness within the service industry. Throughout this section, the sector classification and the technology level classification for manufacturing and service activities are based on each company's sector classification according to their NACE code Rev.2 of EUROSTAT.

Among the 1435 Taiwanese companies that the Orbis database identified, 1294 companies could be classified as either manufacturing or services, with those not conforming to either classification generally involved in agriculture and construction. Of these firms, 181 firms are classified as manufacturing and 1113 firms are classified as services. Using data from the Taiwan Ministry of Economic Affairs' Investment Commission to further analyse the manufacturing sector, our research

29 European Cluster Collaboration Platform projects

uncovered a striking fact - that electronic parts and components manufacturing accounted for 92 per cent of the OFDI from Taiwan into Europe's manufacturing sector in 2016[30]. Figure 12 demonstrates clearly the concentration of Taiwanese OFDI into this single subsector. With this single aspect of the manufacturing sector receiving such a large proportion of investment, none of the other manufacturing subsectors accounted for more than one per cent. Whilst certainly striking, this occurrence may be due to a single, large, nonrecurring investment within 2016. Data from 2014 and 2015 shows electronic parts and components accounted for around 47 to 49 percent of total OFDI into the manufacturing sector, making the figures from 2016 appear more anomalous.

Figure 12: Breakdown on Overseas Foreign Direct Investment into Manufacturing Sector in 2016



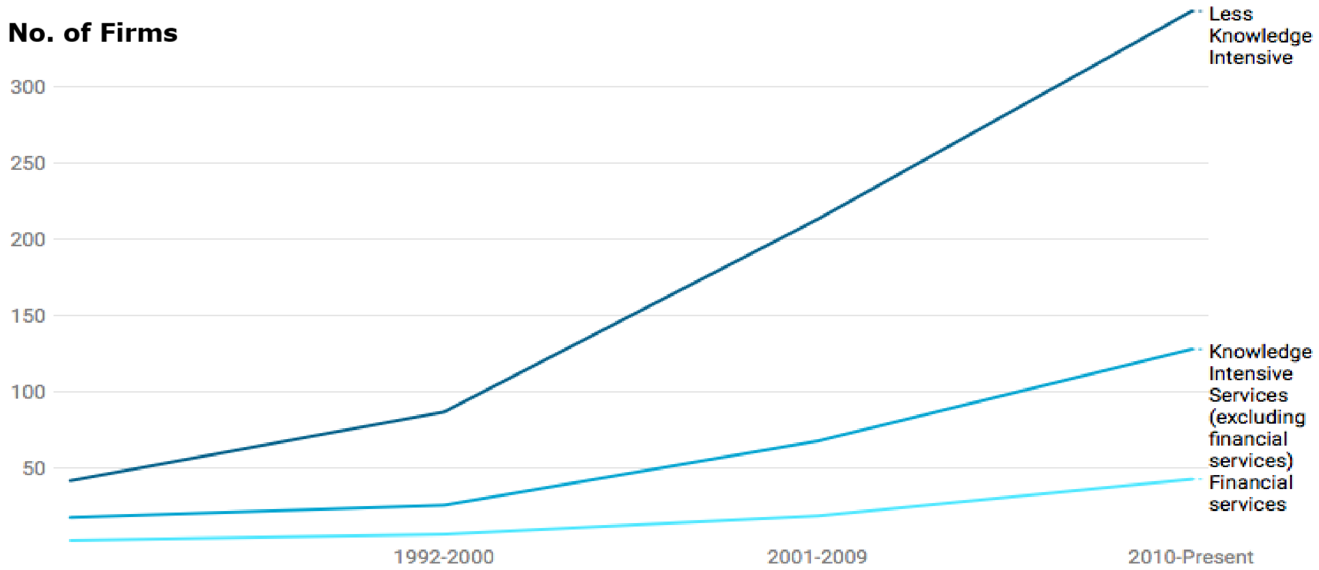
Source: Ministry of Economic Affairs Investment Commission, edited by authors

According to the NACE classifications, *knowledge-intensive services* include financial and insurance activities, legal and accounting activities, publishing activities, education and health. Due to the size of the Taiwanese financial and insurance activities, in figure 13 we have made *financial services* a separate item. Typical examples of *less knowledge-intensive services* are wholesale and retail trade, real estate activities and land transport. Figure 13 shows the increasing number of Taiwanese firms that establish operations in Europe. During 2001-2009, 150 per cent more Taiwanese firms were established in the EU than during 1992-2000. Although this rate appears to have slowed down from 2010 onwards, over the past eight years, 73 per cent of the total number of firms established from 2001-2009 represent a significant increase. Among the three classifications of service, *financial services* are currently growing the fastest. Between the period of 2001-2009 and 2010-present, there has been a 123 per cent increase in the number of firms involved in financial services established in the EU, rising from 19 to 43. The *knowledge intensive services* are also expanding, with the number of these firms increasing from 68 to 128 across the same periods. In comparison, *less-knowledge intensive services* have been growing at the slowest rate, with a 64 per cent increase from 2001-2009. Our research suggests that Taiwanese firms in Europe are transitioning their orientation from

30 This is likely to be different in more recent figures following significant investment from Taiwanese bicycle manufacturers in 2017

less-knowledge intensive services to *knowledge intensive services*. This trend conforms to the overall shift in global Taiwanese OFDI flows towards more knowledge intensive industries, specifically finance and insurance, as demonstrated in chapter one. Alongside analysing the knowledge intensiveness of Taiwanese firms operating in Europe, another useful course of analysis involves assessing the tech-level of these firms.

Figure 13: Trend of Firm Establishment by Knowledge Intensiveness



Source: Orbis, Edited by Authors

Common products of *high-technology firms* include pharmaceutical products, and computer, electronic and optical products. *Medium-high-technology* firms mainly manufacture chemicals and chemical products, as well as electrical equipment, motor vehicles, and machinery. From the NACE classification, examples of *low-technology* products are food products, wood products, paper products and furniture. From figure 14, our research shows the number of *high-technology* firms established has been decreasing since 2009 after a consistent increase that started decades ago, with the number of firms being established dropping from 23 from 2001-2009 to 14 from 2010-present. Meanwhile, the number of *low-technology, medium-low-technology and medium-high-*

GIANT's deepening investment relationship with the EU

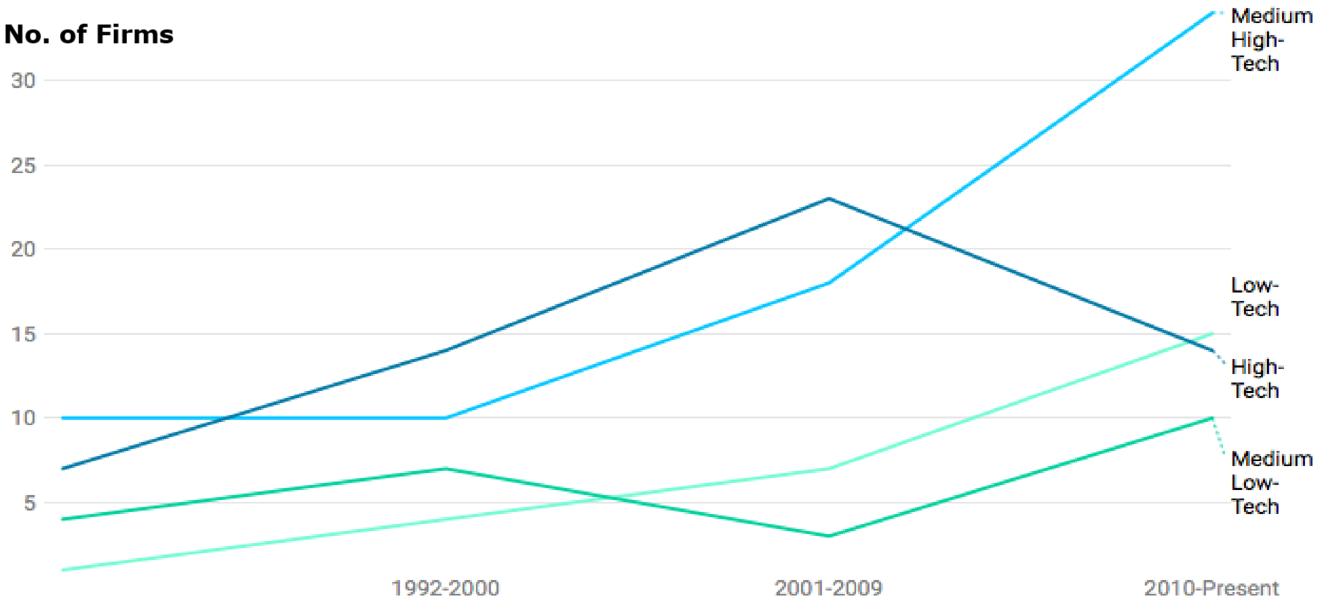
Taiwanese bicycle manufacturer Giant have had a longstanding relationship with the EU, having established its first European production facility in the Netherlands in 1996. Giant, the world's biggest bicycle manufacturer, recently decided to further deepen its ties within Europe, committing to the establishment of a second manufacturing facility in Hungary[31] and a distribution centre in the Netherlands[32]. The combined investment of around USD 130 million that these projects represent will flow into Europe over the next two years, representing a significant investment boost from Taiwan. A focus of this investment is to further develop production and sales of e-bikes in Europe, with the EU being a growing market for electronic transportation. Medium-technology manufacturing of this ilk is proving a popular sector for Taiwanese firms to invest in, with this case lending support to demonstrated trends. Giant however, is not the only Taiwanese firm investing in bicycle manufacturing in Europe. In 2017, Fritz Jou Manufacturing agreed to set up a factory in Portugal, representing a significant, yet undisclosed, investment.

31 Economic Daily, (2018), Retrieved from: Retrieved from: https://money.udn.com/money/story/5612/3235247
32 Investor.com, (2018), Retrieved from: https://news.cnyes.com/news/id/4156703

technology firms increased from 2010-present compared to 2001-2009. In terms of the number of new firms, *medium-high-technology* firms have grown the most, with an increase of 16 firms from 2009. In terms of the scale of the increase, the *medium-low-technology* subsector appears to be the leader among the four subsectors, showing a 233 per cent increase. With our research suggesting that new Taiwanese firms in Europe increasingly orient around medium-technology manufacturing, a recent case study (in text box) into Taiwanese bicycle manufacturer GIANT supports this observation.

Another Taiwanese medium technology sector that may increasingly start to invest in and re-locate to the EU is that of steel production. Following the European Commission's 2017 decision to impose anti-dumping duties on steel products from Taiwan and China[33], Taiwanese steel producing firms may be tempted to relocate to the EU. Many of the products falling under these anti-dumping measures are in high demand throughout Europe's large high-technology manufacturing sector, and are considered to be medium-high tech and medium-low tech. With these significant measures now in force, exporting to the European markets has become increasingly expensive. Resultantly, the fall out of this anti-dumping dispute is expected to have a knock-on effect on Taiwanese investments. With exports to Taiwan's fifth largest trading partner becoming less profitable, in order to regain profitability, some Taiwanese firms (many of which currently have production located in the PRC) may be tempted to avoid tariffs by relocating production to the EU.

Figure 14: Trend of Firm Establishment by Technology level



Source: Orbis, Edited by Authors

2.4 Geographical distribution of Taiwanese direct investment (TDI) in the EU

In this section, we will be looking at the spatial distribution of Taiwanese investments in Europe. This analysis will also track from a regional perspective, showing that as in 2014, Western Europe is the predominant destination for investment from Taiwan.

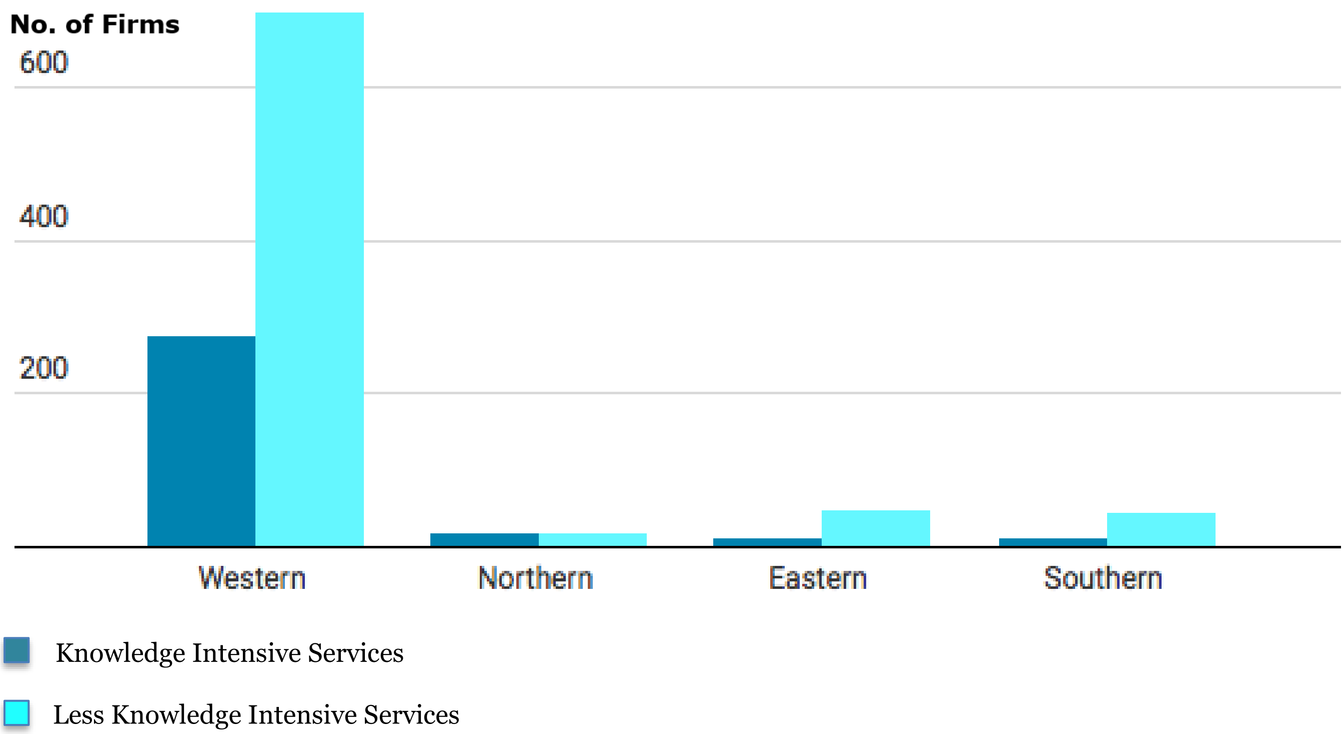
Continuing our discussion on the manufacturing and services of Taiwanese companies in Europe, this section will analyse the geographical distribution of these same firms. The purpose of this approach is

33 European Commission, (2017), Retrieved from: http://trade.ec.europa.eu/doclib/press/index.cfm?id=1615

to develop an understanding of firm's geographical locations in relation to the industries they are involved in. Differing from the previous section, from now onwards, we have grouped *knowledge-intensive services* and *financial and insurance services* into one category. *Less knowledge-intensive services* remains as an independent category. From figure 15, it is clear to see that Western Europe dominates both *knowledge-intensive services* (274) and *less knowledge-intensive services* (696), accounting for the vast majority of the firms in Europe*. Knowledge-intensive* firms in Western Europe represent 87.5 per cent of the total number of these firms across Europe as a whole. A plausible explanation is that several major cities and financial centres are located in Western Europe, such as London, Frankfurt, Luxemboug and Paris. Therefore, there is a strong demand for financial services and knowledge intensive services such as legal and accounting services. Those cities also have a strong need for health and education related services. Although the number of *knowledge-intensive* firms is high, *less knowledge-intensive services* remains the dominant services subsector in Western Europe, accounting for 72 per cent of the services sector.

Interestingly, there are more *knowledge-intensive* firms (18) than *less knowledge-intensive* firms (15) in Northern Europe. This unique phenomenon is not seen in other regions and it could result from the large knowledge-based economy in Northern Europe. Taiwanese firms are attracted to the area by the abundance of highly skilled workers. For example, Stockholm and Helsinki are ideal locations for developing financial technology services that require specific and technical skills. The high cost of labour in Northern Europe also keeps the Taiwanese firms from investing in *less knowledge-intensive services.* The services sector in Eastern Europe and Southern Europe is primarily dominated by *less knowledge-intensive* services, accounting for about 80 per cent of the sector. Compared to the other two regions being assessed, these two regions have fewer skilled workers and have less demand for *knowledge-intensive services.*

Figure 15: Geographical Distribution of Firms by Knowledge Intensiveness (as of 2017)



Source: Orbis, Edited by Authors

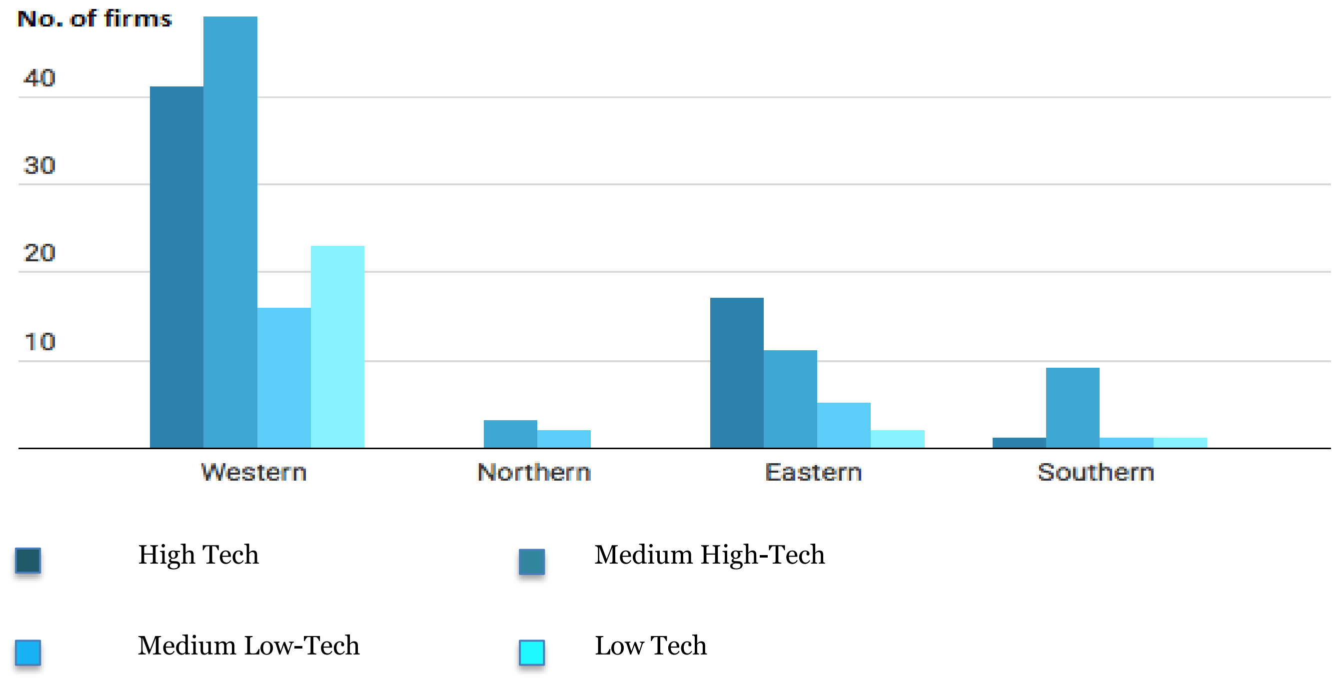
Figure 16 demonstrates that the number of *low-tech* Taiwanese firms in Europe (26) is low compared to the number of *high-tech* (59) and *medium high-tech* firms (72) - the tech level of Taiwanese firms was not fully available on the Orbis database, resultantly, the information displayed here indicates current trends. The trend here shows that Taiwanese firms are predominantly engaging in manufacturing products that are more technologically advanced, such as pharmaceutical products. The majority of the *high-tech* firms (49) are situated in Western Europe, with the rest based predominantly in Eastern Europe (17). In Western Europe, *hi-tech* firms and *medium high-tech* firms make up about 70 per cent of the total number of Taiwanese manufacturing firms. In the IMD[35] World Talent Ranking 2017, Switzerland, Belgium, the Netherlands, Germany and Luxembourg are ranked within the top ten. Resultantly, in addition to the close proximity to markets, the strong reserve of talent in Western Europe goes some way to explaining geographical trends.

Taiwanese manufacturers are known for producing machinery as well as electronic and electrical equipment. As the production of these products becomes increasingly automated, access to talented workers with professional backgrounds is no longer a major concern for firms involved in this sector. As a result of this, Taiwanese manufacturing firms may establish themselves in Eastern Europe and Southern Europe where the cost of labour and land is relatively inexpensive compared to Western and Northern Europe. Our research shows that there are only five manufacturing firms operating in Northern Europe. In 2017, the average costs of labour per hour in manufacturing was EUR 14.1 in Portugal and EUR 4.9 in Bulgaria.[36] Meanwhile, the costs were EUR 38.3 in Sweden, EUR 34.1 in Germany and EUR 34.8 in the Netherlands. The large differences in the cost of labour between Northern and Eastern Europe demonstrates the reason why there are seven times as many manufacturing firms located in Eastern Europe. This preference of Taiwanese manufacturing companies to locate production in Eastern Europe has a clear effect on employment figures throughout the EU. Information from the survey conducted by the authors showed that the 80 companies in Eastern Europe that responded to the questionnaire employed 16,708 people. When compared to the 3,822 people employed by the 93 companies in Western Europe that responded to the questionnaire, it is clear that Taiwanese companies involved in more labour-intensive industries prefer to locate themselves in the East of Europe.

In light of this information, somewhat surprisingly, Western Europe has 88 per cent of all the *low-tech* firms in Europe, despite the cost of labour being considerably higher than in Eastern and Southern Europe. This fact indicates that when choosing locations at which to become established in Europe, Taiwanese firms don’t always consider cost of labour as much as one might think. Alternately, proximity to markets would seem a principal influencing factor, with the exception of cases where industries are particularly labour-intensive. Another influencing factor is productivity, as many Western European countries are amongst the world’s most productive[37]. Referring to the NACE classifications, *low-tech* goods include furniture, food products, wood products and textiles. These products are usually heavy, large in volume, and yield a low profit margin. Hence, the cost of transportation of these goods is considerably higher when compared to high-tech products such as semi-conductors. If firms were to set up their factories in Eastern and Southern Europe, the costs of transportation would be significantly higher than if they established factories in Western Europe. *Medium low-tech* products are classified as rubber and plastic products, basic metals, fabricated metal products and non-metallic metal products. Therefore, the close proximity to market is also relevant when explaining why two-thirds of *medium low-tech* firms are established in Western Europe. Meanwhile, Southern Europe and Eastern Europe only have one and two *medium low-tech* firms.

35 International Institute for Management Development
36 Eurostat, Estimated Hourly Labour Costs, Retrieved from: https://ec.europa.eu/eurostat/statistics-explained/index.php/Hourly_labour_costs
37 OECD.stat, 2017, Retrieved from: https://stats.oecd.org/Index.aspx?DataSetCode=PDB_LV#

Figure 16: Geographical Distribution of Firms by Tech-level (as of 2017)



Source: Orbis, Edited by Authors

As discussed earlier in this section, around two-third of the Taiwanese firms in Europe are considered small firms, with the rest consisting of medium firms and large/very large firms in equal proportion. When considered alongside the findings of the survey conducted by this report's authors however, this information was found to not provide a complete picture. In light of the information uncovered through the survey in question, it is important to be aware that when discussing size of firms, this report refers to the size of operations of firms based throughout European member states, not the size of parent companies. With this in mind, this report will now discuss the relationship between the geographical location and size of firms. Company sizes categories are congruent with previous definitions.

Out of the 1435 Taiwanese firms that we have identified, around 84 per cent are located in Western Europe[38] (1211), seven per cent of the firms are located in Eastern Europe[39] (102) and around five per cent are located in Southern Europe[40] (79), with the rest located in Northern Europe[41]. Of all Taiwanese operations based in Western Europe, 70 per cent are classified as small sized (852) and 17.5 per cent of the firms are classified as medium sized. The composition is roughly the same as the overall composition in Europe. However, small firms only make up around 50 per cent of the firms in Southern Europe and Northern Europe. Interestingly, within Eastern Europe, small firms make up only 40 per cent of all firms, this could be a result of lower wages in the region attracting more labour intensive industries. From figure 17, we could see a consistent pattern throughout Eastern, Northern and Southern Europe – the number of medium firms and the number of large/very large firms are roughly equal in each region. The only exception is Western Europe where there are 69 large/very large firms less than medium firms.

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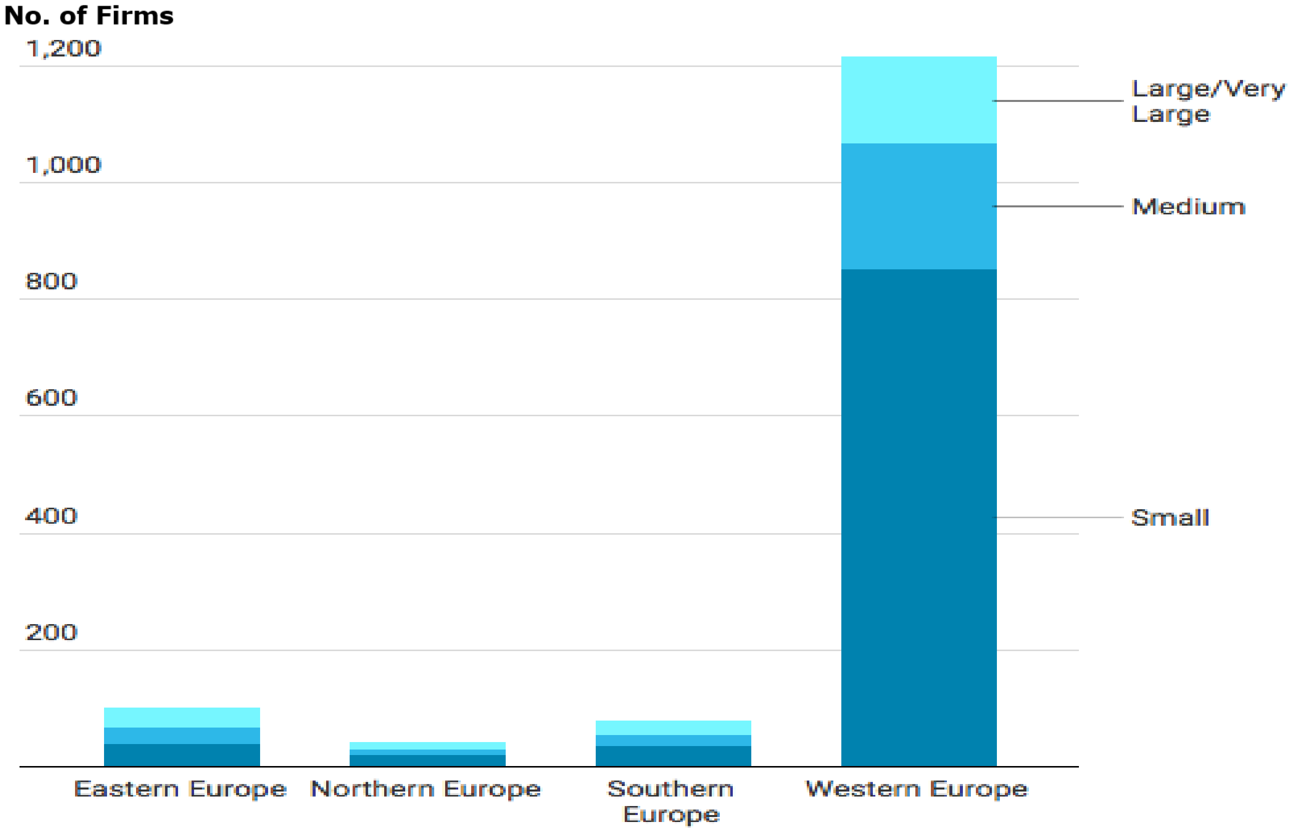
38 For countries included in "Western Europe", See page 17
39 Eastern Europe is comprised of Bulgaria, Slovakia, Slovenia, Romania, Poland, Hungary, Estonia, Latvia, Lithuania and Czech Republic
40 Southern Europe consists of Cyprus, Italy, Portugal, Greece, Malta and Spain.
41 The region of Northern Europe includes Norway, Sweden, Finland and Denmark.

Figure 17: Geographical Distribution of Firms by Size of Company (as of 2017)



Source: Orbis, Edited by Authors

Having shown where firms of various sizes have established themselves around Europe, here, we provide some analysis on what factors are likely to influence Taiwanese firms when establishing themselves around Europe. To do this, we assessed the World Bank's "Ease of Doing Business Ranking"[42] and Education First's "English Proficiency Index"[43], as displayed in figure 18. We argue that ease of doing business is one of the key factors that Taiwanese firms of all sizes take into consideration when choosing a location to establish themselves. Within the Ease of Doing Business Ranking, countries in Western Europe rank relatively higher than their counterparts in Eastern Europe. Among the countries in the two regions, United Kingdom is the only one that ranks within the top 10, with Germany, the country home to more Taiwanese firms than any other European nation, ranking at 20th globally. The rest of the major Western European countries all rank in the top 35. Contrarily, with the exception of Estonia, which ranks 12th, all the Eastern European countries rank outside the top 25, with Romania, Hungary and Bulgaria all ranking around the mid to low 40s.

Another key factor for Taiwanese firms looking to establish European operations is the proficient use of English within potential investment destinations. With English being the most widely used second language in the world, it is likely to be the primary language used by Taiwanese firms when conducting business internationally. In addition to this, the proficient use of English would be vital for firms when negotiating with business partners in destination countries or communicating with foreign governments. Looking at the EF[44] English Proficiency Index, it is evident that people from Western European countries generally have higher English proficiency than those from Eastern European. Of

42 World Bank, (2017), East of doing business index, Retrieved from: https://data.worldbank.org/indicator/IC.BUS.EASE.XQ?year_low_desc=false
43 Education First, (2017), English Proficiency Index, Retrieved from: https://www.ef.be/nl/epi/
44 English First

particular note, the Netherlands ranks first in the world, with Germany ranking 9th and Austria 10th. Whilst Eastern European countries demonstrate reasonable levels of English proficiency, with Poland, Romania and Hungary ranking 11th, 17th and 19th respectively, they generally rank lower on the proficiency Index, with the exception of France (32nd). When both ease of doing business and English proficiency are taken into account, it is understandable that Taiwanese firms prefer to set up operations in Western Europe, with Germany and the Netherlands being particularly popular destinations for investment. In addition to this, when considering Eastern Europe, it is not hard to understand why the Czech Republic and Poland, countries that do relatively well in both rankings, are home to more Taiwanese firms than other Eastern European countries.

Figure 18: Ease of Doing Business Ranking and English Proficiency Index 2017

COUNTRY	EASE OF DOING BUSINESS RANKING	ENGLISH PROFICIENCY INDEX
United Kingdom	7	N/A
Estonia	12	N/A
Germany	20	9
Austria	22	10
Poland	27	11
Czech Republic	30	20
France	31	32
Netherlands	32	1
Switzerland	33	14
Slovak Republic	39	21
Romania	45	17
Hungary	48	19
Bulgaria	50	22

Source: The World Bank; EF Education, edited by editors

2.5 Conclusion

Throughout this chapter, we have provided a conclusive overview of Taiwanese firms operating within Europe. In order to make our analysis as rigorous as possible, we assessed a variety of trends and patterns displayed by these firms, including: date of establishment; geographical distribution; size of firm; knowledge intensity; and technology level. This process has allowed us to develop a clear picture of the state of Taiwan's current economic ties within the EU. Having done this, we will now turn to assess the recent investment history between the two regions in question, providing an eight-year trend analysis of Taiwanese OFDI into Europe.

Chapter 3: Eight Year Trend Analysis of Taiwanese OFDI into Europe

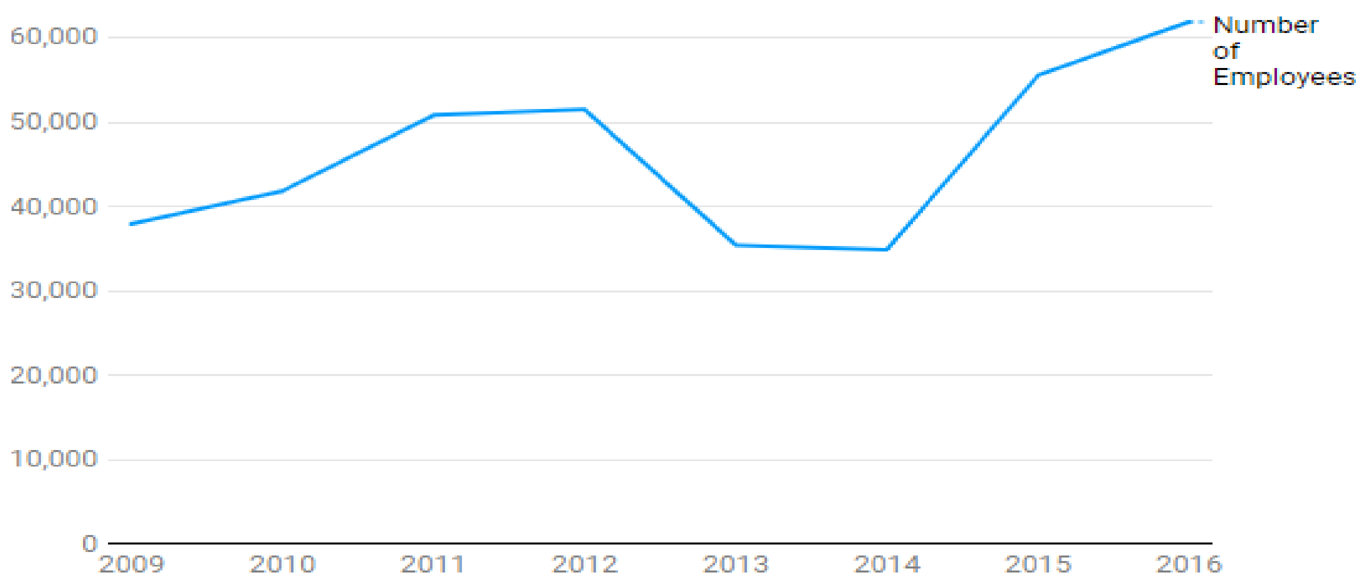
3.1 Introduction

Throughout this third and final chapter, we will be assessing aggregate data showing Taiwanese OFDI flows into Europe over the past eight years, stemming from 2008 until 2016 - the most recent year with complete available data. Whilst the Orbis database displays some of the 2017 and 2018 data, due to the incomplete nature of this data, its inclusion in this section would skew the trends, and weaken any analysis. The previous chapter has provided us with a clear snapshot of the current economic relationship existing between the two regions in question, however, the data displayed in the coming chapter makes it possible to analyse how this relationship has developed over recent years.

3.2 Employment

Through analysing the relationship between OFDI and employment, we are able to quantify one of the major positive impacts that foreign investment can have upon a recipient nation. A primary concern of all states and regional institutions is to ensure the employment of its citizens, with a nation or a region's economic health often judged in large part against its employment figures. By demonstrating not just the financial volume of OFDI flowing into the EU from Taiwan, but also the positive effect this investment has upon employment, the potential advantages of greater investment relations between either region will be made yet clearer. Figure 19 shows us an estimated figure of employment generated by Taiwanese firms in Europe over the past eight years. Naturally, whilst these figures show a substantial proportion of employment generated from Taiwanese OFDI, when employment not generated directly by Taiwanese firms is considered, the complete figures are likely to be even greater. In addition to this, the Orbis database (the source of the data for this chapter) only provides employment figures for 75 per cent of Taiwanese firms in the EU. As such, the statistics displayed in this section should simply be taken as indicators of trends.

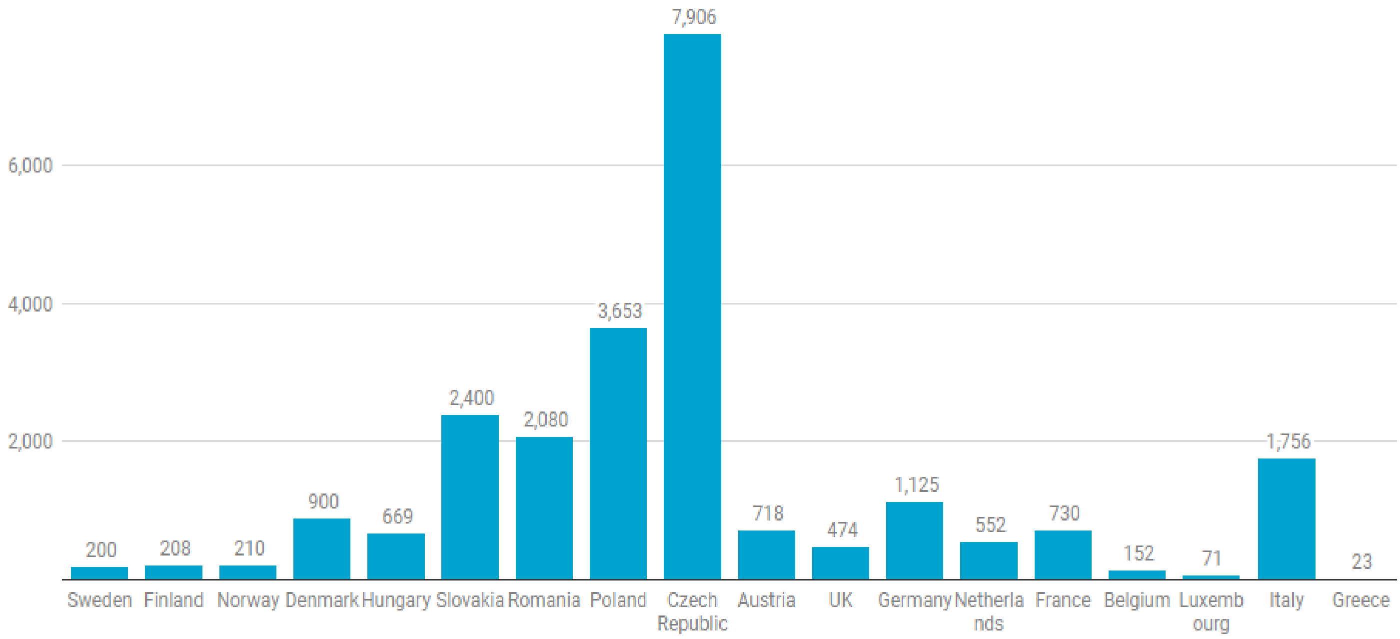
Figure 19: Estimated Total Employment in Europe by Taiwanese firms



Source: Orbis, Edited by Authors

From figure 19, we can see how over the past eight years, there have been significant fluctuations in the overall volume of employment generated by Taiwanese firms. After steady employment growth from 2008 onwards, figures slumped in 2013 and 2014, rebounding again in recent years. Despite the fluctuations, it is evident that Taiwanese OFDI brings significant employment to the European Union, something that the signing of a BIA is likely to proliferate.

Figure 20: Estimated Distribution of Employment in Europe by Taiwanese Firms, 2018

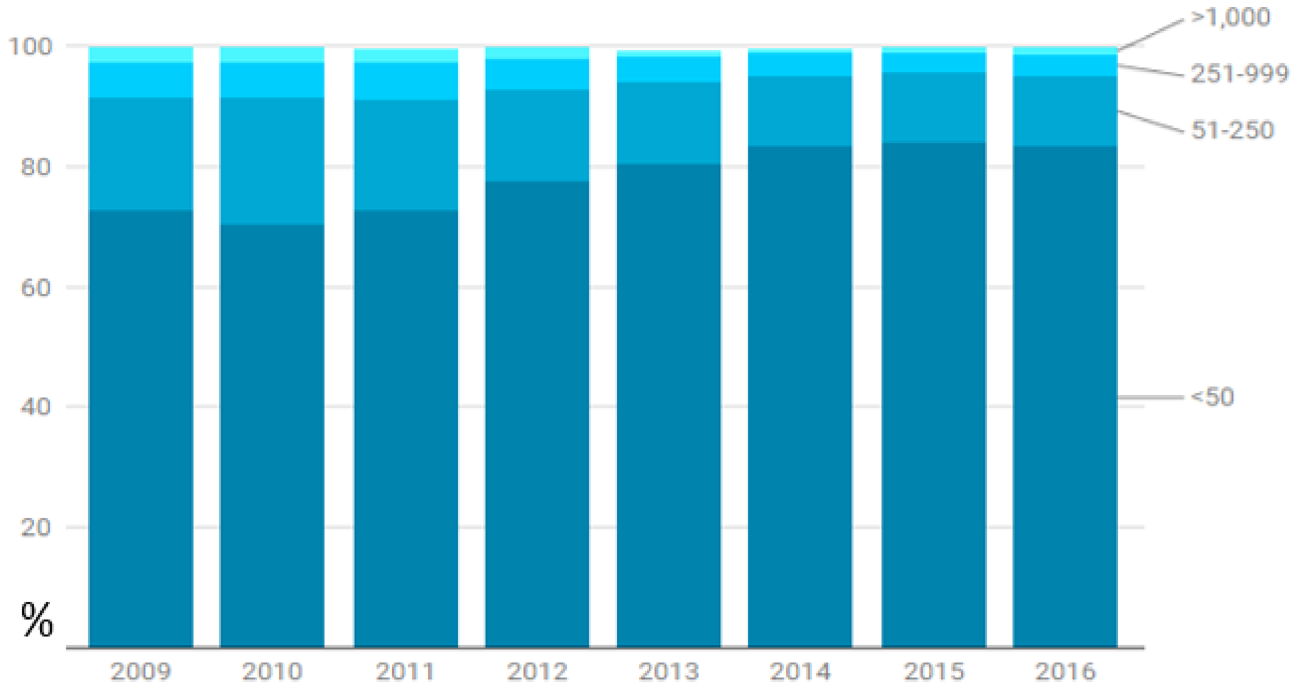


Source: Survey Conducted by Authors, Edited by Authors

Providing a more in-depth breakdown of the employment in Europe generated by Taiwanese firms, figure 20 offers an estimated country-by-country breakdown of the information shown in figure 19. The information displayed in figure 20 has been gathered from the survey conducted by the report's authors, and resultantly doesn't offer a complete picture. The survey was unable to gather information from all EU member states, and the information on states for which information is available is not complete. Despite this however, figure 20 clearly demonstrates trends in employment generated by Taiwanese OFDI in the EU. The most obvious trend shown in this chart is the concentration of employment in Central and Eastern Europe. Although chapter two unveiled how Taiwanese firms are predominantly located in Western Europe, this chart shows how Taiwanese firms involved in more labour intensive industries prefer to locate production in CEE. Reasons for this have been mentioned previously, with the abundance of low cost and high skill labour likely being the primary draw.

Having shown the overall employment figures generated by Taiwanese firms over the past eight years and a country-by-country break down of figures for 2018, we will now show the distribution of this employment across said firms. In chapter two, it was shown that a large number of Taiwanese firms operating in the EU, despite many of them being subsidiaries of large MNC's, are classified as small or medium sized due to their low number of employees. Figure 21 goes further than previous analysis, showing that not only do numerous Taiwanese firms in the EU have small workforces, but that this figure is on the rise, with the percentage of Taiwanese companies established in the EU employing 50 or less people growing consistently. Other than a small drop in 2010, this percentage has grown or remained steady every year. Whilst not being represented in figure 21, the limited data available on the Orbis database for 2017 and 2018 conforms to this trend. One striking trend observable in figure 21 is not just the growth of firms employing 50 or less people, but the proportional shift away from firms employing far greater numbers of staff. The number of Taiwanese companies employing over 1000 members of staff has stagnated over the past eight years, peaking in 2012 at 9 and reaching a low of 5 in 2014[45]. Whereas the number of companies employing large workforces has remained similar, other categories have shown substantial changes. Whilst the number of companies employing over 1000 people increased by 14 per cent from 2009-2016, companies employing 251-999 increased by 43 per cent, those employing 51-250 by 40 per cent, and the companies employing fewer than 50 people increased by 162 per cent.

Figure 21: Value ranges of employees (as percentage of number of companies)



Source: Orbis, Edited by Authors

Tracking the impact of Taiwanese OFDI upon employment in Europe is likely to emerge as a subject of great interest in the coming years. As the nature of work changes and business becomes increasingly digitalised, the impact of foreign investment upon employment is certain to be altered. With increased automation in the manufacturing sector and data exchange driving productivity, many fear that traditional employment will be eroded by what is often termed “Industry 4.0”. This being the case, the case-study below explains the nature of Industry 4.0 and alludes to the impact it may have upon employment in the near future.

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45 Of years with complete data

Industry 4.0 and its impact upon employment

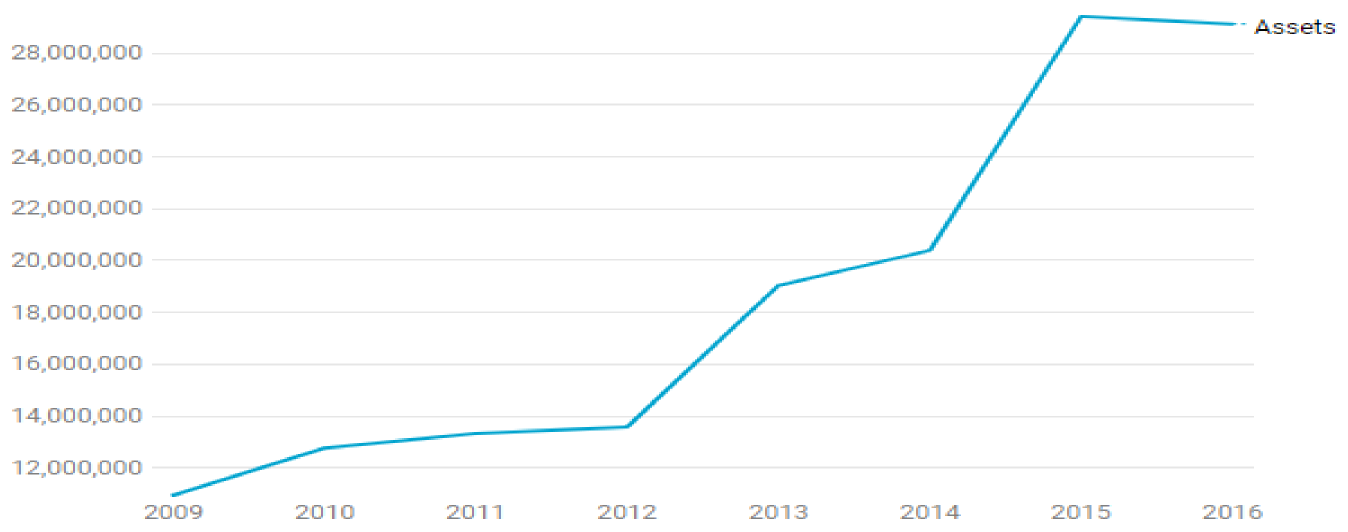
With an industrial sector at the forefront of hi-tech manufacturing, Industry 4.0 is high on the agenda of numerous Taiwanese manufacturing firms[46]. Industry 4.0 is understood as a key means for increasing productivity and efficiency. Drawing on new technologies in the fields of automation and data exchange, this new industrial era is seen as a priority within Taiwan. With numerous Taiwanese manufacturers developing and embracing this new technology, Europe represents a fertile market for investment and cooperation.

As Industry 4.0 becomes increasingly well-established, there are fears of the impact it may have on employment. Studies have shown that whilst this overhaul of production is likely to affect traditional manufacturing jobs, numerous new products, services, and occupations are likely to emerge as the result of these new technologies[47]. Whilst some jobs may be replaced as part of this industrial shift, the EU should be open to any incoming Taiwanese investment in this sector so as to not fall behind global competition and remain at the cutting edge of manufacturing.

3.3 Assets

Moving on to look at the assets held by Taiwanese firms based in the EU, figure 22 represents an estimate of the total assets of these firms. This figure remains an estimate due to the lack of complete information available on the Orbis database, however, with Orbis having recorded the assets of over 75 per cent of Taiwanese firms based in the EU, the graph in figure 22 is certainly a strong indicator of trends. Upon assessing the graph below, the impressive growth of total assets is instantly observable. Despite a minor drop in this figure in 2016, the cumulative assets held by the firms in question grew by 166 per cent from 2009-2016. This is largely considered a positive occurrence from within Europe, as some of these assets will be taxable. In addition to this, as they may also lead to increased investment in the region, and resultantly, employment figures and tax revenue will be positively impacted.

Figure 22: Estimated total assets of Taiwanese operating firms in the EU (in EUR 1000)

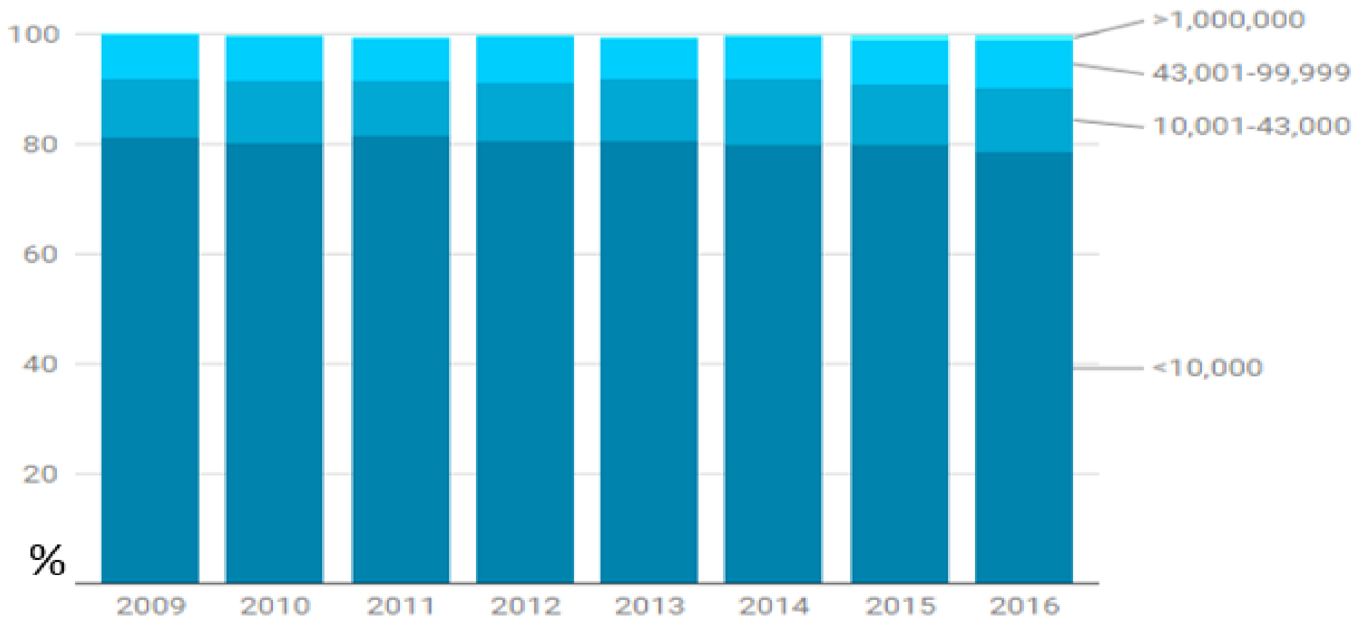


Source: Orbis, Edited by Authors

46 The Jakarta Post, *Industry 4.0 Main Agenda for Taiwanese Machine Manufacturers,* August 2018, retrieved from: http://www.thejakartapost.com/news/2018/08/17/industry-4-0-main-agenda-for-taiwanese-machine-manufacturers.html
47 Vermeulen B, Kesselhu J, Pyka A, Saviotti P, *The Impact of Automation on Employment: Just the Usual Structural Change?* May 2018

With the sum of assets held by Taiwanese firms demonstrating such striking growth, we will now assess the distribution of these assets amongst the firms in question. Having analysed the size of firms according to employment figures, we will now turn our attention to the size of firms in relation to financial holdings. Figure 23 shows the value range of assets held by Taiwanese firms in the EU. The first observable pattern in this eight-year trend graph is the striking consistency in value ranges demonstrable throughout the time period in question. The proportion of firms in either category listed has remained remarkably similar, with a small but gradual drop in the percentage of firms with assets under EUR 10 million being the main noteworthy trend. This being the case, the information displayed within figure 23 must be contextualised alongside that displayed in figure 22 for its significance to become clear. Given the stark increase in overall assets held by Taiwanese firms in the EU, all value ranges displayed in figure 23 have seen an increase in the number of firms falling under them. The number of firms with assets under EUR 10 million has increased by 51 per cent, with firms with assets between both EUR 10-430 million and 430 million-1 billion both increasing by over 69 per cent. The greatest increase amongst all value ranges however, was within the top range, which has seen firm numbers falling under this category increase from 1 in 2009, to 7 in 2016. This supports our previous findings that although many Taiwanese firms based in the EU have small numbers of employees, often they are subsidiaries of MNC’s and as such have significant assets. An example of this is the operation of China Airlines in the UK, a firm which reported an employment number of six, and total assets exceeding EUR 1 billion[48].

Figure 23: Value range of assets held by Taiwanese firms operating in the EU (in EUR 1000)



Source: Orbis, Edited by Authors

3.4 Turnover

Having analysed the eight-year trends of both employment generated by Taiwanese firms operating in the EU as well as their overall assets, we will now assess the cumulative annual turnover of these firms. At this point, it is important to note that the information available on the Orbis database for company turnover is more deficient than at other points throughout this chapter. Whereas Orbis has around 75 per cent of the data concerning employment and company assets available for analysis,

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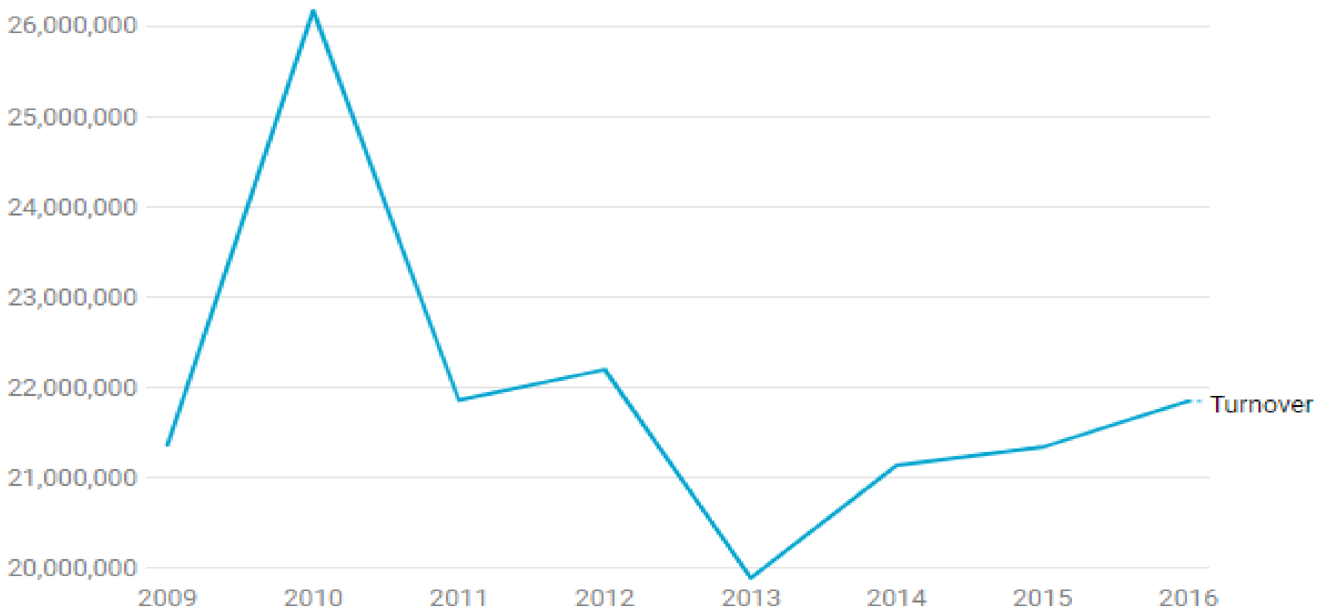
48 Information gathered through the author’s survey of Taiwanese firms operating in the EU

turnover figures are only available for roughly 40 per cent of Taiwanese firms in Europe. This represents a clear problem, as whilst we still feel that this section is worth including due to the trends that it alludes to, the information visualised within these graphs doesn't represents the complete picture.

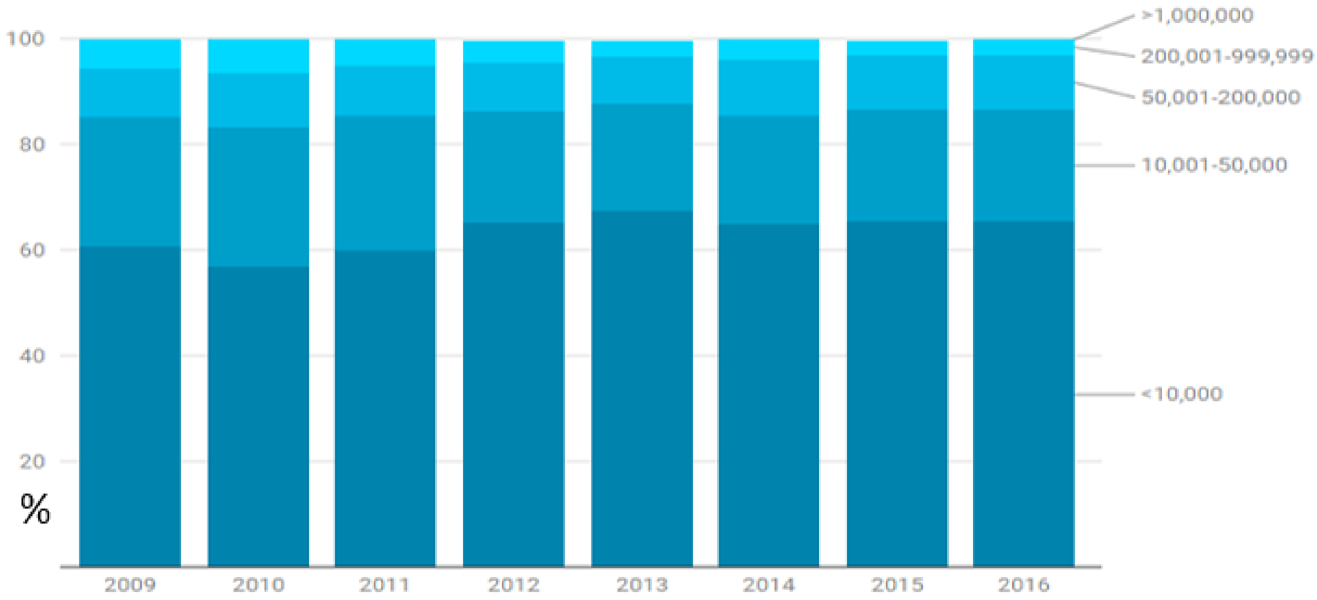
Figure 24: Estimated total annual turnover of Taiwanese firms operating in the EU (in EUR 1000)



Source: Orbis, Edited by Authors

Figure 24 shows an estimate of the annual turnover of Taiwanese firms operating within the EU and is devised from the information available to us on the Orbis database. Whilst the information used to create this graph is incomplete, the stagnating annual turnover of the firms whose data is readily available is noteworthy. Whilst the turnover figures from the other 60 per cent of firms relevant to this study may act to significantly change this trend, the somewhat negative trends demonstrated in figure 24 is anomalous when compared to the largely positive trends seen throughout this report. In addition to this, when figure 25 is also taken into account, the number of firms operating in Europe demonstrating the highest value range of turnover has been declining in recent years. Whilst none of the firms assessed had a turnover of over EUR 1 billion, the number of firms falling within the second highest category (EUR 200 million - 1 billion) have declined from a high of 17 in 2010 to just 11 in 2016. Alternately, firms with lower turnovers (EUR 10 million or less) have been growing, up from 139 in 2009 to 237 in 2016; a 70 per cent increase. Whilst this information is incomplete, it conforms with findings elsewhere in this paper that the size of firms operating in the EU are decreasing, with smaller firms and subsidiaries of large companies playing an increasingly important role in investment relations between the EU and Taiwan.

Figure 25: Estimated value range of turnover amongst Taiwanese firms operating in the EU (in EUR 1000)



Source: Orbis, Edited by Authors

Chapter 4: Final Conclusion

The purpose of this report has been to evaluate the significance of Taiwanese OFDI in the European Union. Throughout this report, key characteristics of Taiwanese enterprises operating within the EU have been highlighted and analysed, elucidating Taiwan's economic presence in the European Union. Taiwanese OFDI has been assessed based on diverse investment indicators including geographical location, sectoral distribution, technology level and knowledge intensity.

This study has made evident the genuinely global presence that Taiwan has established as a result of its significant OFDI. Whilst the majority of OFDI is flowing into the PRC and increasingly into Latin America and the Caribbean, Taiwan has maintained a perceptible presence in the EU. Although recent years have seen a decline in overall Taiwanese OFDI flowing into the EU, there is still a significant Taiwanese economic influence in the region, with much scope for further investment. Within Europe, the industries that have benefited most from Taiwanese Investment include electronic parts and components manufacturing, real estate, and finance and insurance; with the latter two in this list recently witnessing a decline in investment from Taiwan.

Throughout this report, the positive impact of Taiwanese investment throughout Europe has been laid bare. The assets held and revenue created by Taiwanese firms, not to mention the employment they generate, contribute significantly to the prosperity and economic stability of the EU and its member states. If investment between Taiwan and the EU can be further encouraged however, the EU stands to access further benefits. If the EU is able to facilitate more of Taiwan's world leading high-tech firms to its shores, the transfer of technological knowledge will be a welcome contribution in addition to the economic stimulus.

From a geopolitical perspective, as a wave of protectionism sweeps across the globe, the European Union is fast emerging as the most ardent advocate of the rules based international order. With the USA and China seemingly heading towards a trade war, the stability and predictability of the European Union makes it a reliable and appealing destination of foreign direct investment. In this era of mercurial international politics and protectionist economics, the EU and Taiwan stand to benefit greatly from deepening their bilateral investment relations through the establishment of a BIA. The information in this report shows the strong economic relations that exist between these two regions, however it also makes evident the existing scope for improvement. Looking to the future, a bi-lateral investment agreement with a strong focus on the high-tech industries in which Taiwan is a world leader would be of great benefit to both the EU and Taiwan.

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